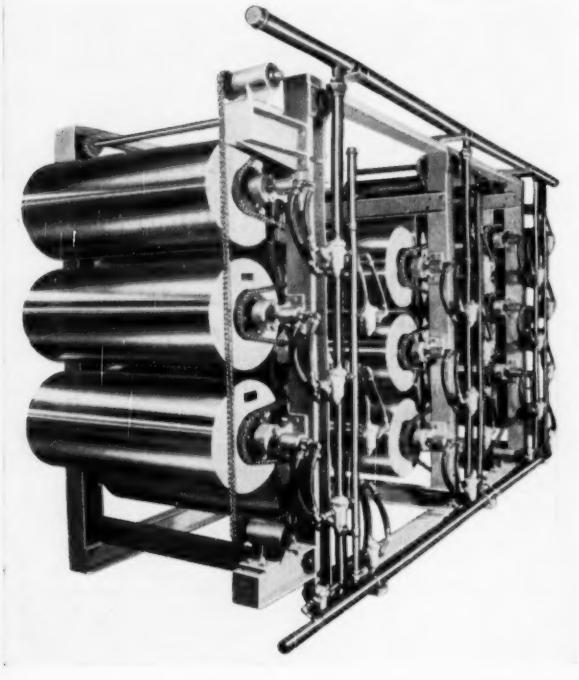
AUGUST, 1950

Textile Industries

formerly COTTON Textile Industries

ANOTHER EXAMPLE OF FINE CRAFTSMANSHIP

Complete Dryers by The Textile Shops



Complete contact (Dry Can) drying equipment designed for your particular needs.

Illustrated is a small dryer which consists of 23-inch diameter by 60-inch face length polished stainless steel cans to operate at 35 psig., steel plate sprocket and roller chain drive, rotary steam joints, traps and piping, frame, etc.

We are equipped to build new and repair all types and sizes of drying cylinders for pressures to 150 psig.; ASME Code Construction if required.

We can furnish steam, oil, or gas heated convection dryers to your specifications, or will collaborate in their design.

We welcome your inquiries and will gladly quote without obligation.

THE TEXTILE SHOPS — Spartanburg, S. C., U. S. A.

Designers and Manufacturers of Textile Metal Products

NEW LOW COST of SODIUM CHLORITE Permits Wider Use

and NEW convenient form . . . a 50% solution now available in tank car quantities . . .

● Increased production – using improved methods – has made possible new low prices on Mathieson Sodium Chlorite. And, with the new, easily handled 50% solution, it is now economically feasible to use this powerful and unique oxidizing agent in many more processes.

Sodium Chlorite, by releasing chlorine dioxide, bleaches cellulosic fibers without causing degradation. Consequently, wood pulp and textiles can be made whiter with greater tensile strength retention than with any other known processing agent.

Stable, non-hygroscopic, water-soluble Mathieson Sodium Chlorite is available for industrial use as a dry, straw-colored crystalline powder packed in 100 lb. drums. The new form – a 50% aqueous solution – is available in tank car quantities. Write today for complete information, samples and prices. Mathieson Chemical Corporation, Mathieson Building, Baltimore 3, Maryland.

For Diversity, Capacity and Flexibility, rely on Mathieson for these basic heavy chemicals:

Sulphuric Acid	Ammonium Sulphate
Processed Sulphur	Nitrate of Soda
Soda Ash	Chlorine
Caustic Soda	Calcium Hypochlorite
Bicarbonate of Soda	Sodium Chlorite
Ammonia	Chlorine Dioxide

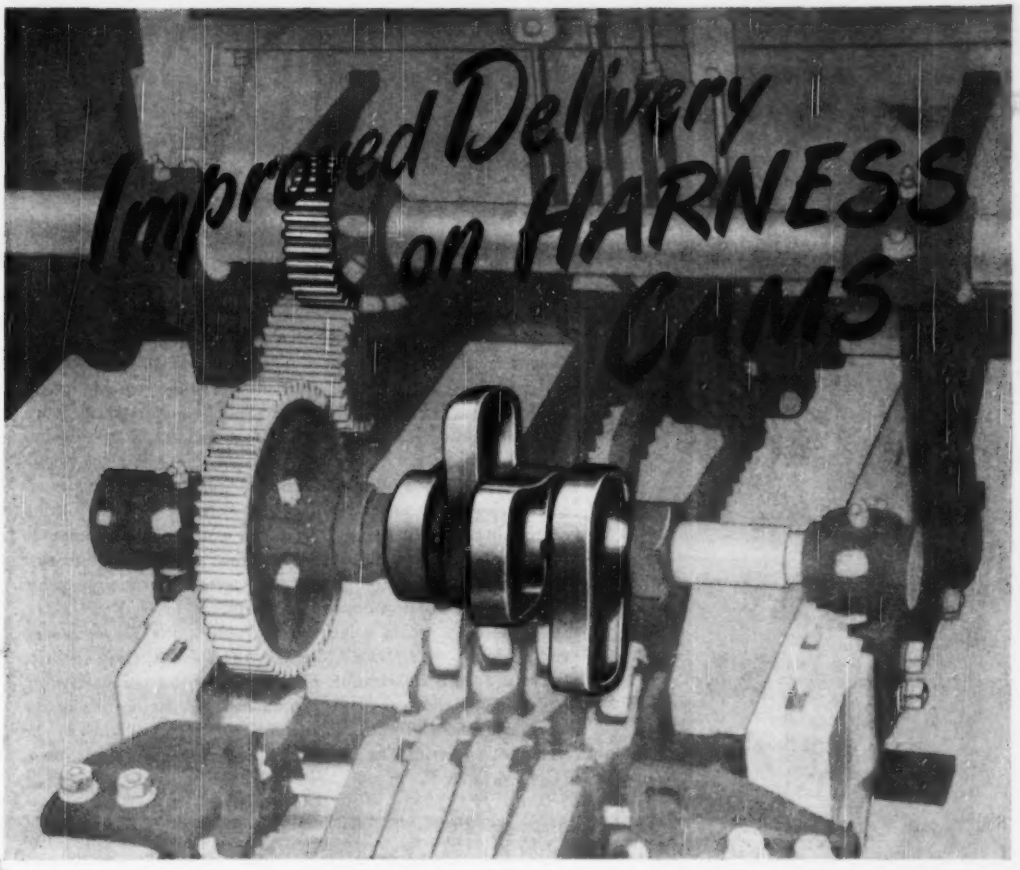
Mathieson CHEMICALS

6374

SERVING INDUSTRY, AGRICULTURE AND PUBLIC HEALTH

TEXTILE INDUSTRIES is published monthly at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A. Executive and Editorial Offices, 806 Peachtree St., Atlanta 3, Ga.
Subscription Rates: United States and Possessions, $2.00 for one year; Canada, South America, Central America, $2.00 per year; Foreign Countries, $3.00 per year. Entered as second-class matter at the post office, Dalton, Georgia, under the Act of March 3, 1879.

Volume 114 Number 8



NEW pattern equipment, added facilities at our East Spartanburg foundry, and increased warehouse capacity now enable us to give improved delivery on Draper harness cams and change gears.

The three Draper warehouses are stocking the most popular types of cams and change gears and, in the case of special cams, a rush priority system has been set up to assure rapid filling of orders.

Draper Masterweave Cams are the best because they are designed by experience.

DRAPER

ATLANTA, GA. HOPEDALE, MASS. SPARTANBURG, S. C.

FEWER BEARING REPLACEMENTS

WHEN you lubricate with TEXACO REGAL STARFAK

In motors and other high-speed machines, your grease-lubricated ball and roller bearings will run smoother and last far longer when you use *Texaco Regal Starfak*. This premium-quality lubricant assures the trouble-free performance that means lower maintenance costs.

Texaco Regal Starfak stays in the bearing, maintains its protective lubricating film over moving parts without "drag" in starting or running. *Texaco Regal Starfak* has exceptional resistance to oxidation, gum formation and separation. You'll also find that it far outlasts ordinary greases and saves lubrication expense because fewer applications are necessary.

For bearings where splatter is a problem, use *Texaco Stazon* and avoid oil stain. *Texaco Stazon* won't splatter, creep or drip.

Let a Texaco Lubrication Engineer help you reduce bearing replacements and many other costs. Just call the nearest of the more than 2,000 Texaco Wholesale Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TEXACO

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

Textile Industries

Volume 114, Number 8
August, 1950

FEATURES

Trends Indicated in Industry Area Survey (No. 4—Pension Plans) ... 71
The Value of Appraisals for Insurance Purposes ... 87
Brampton's Wool Storage Bins ... 91
Materials Handling at Borden Mills ... 92
Infra-Red Drying Increases Finishing Plant Production ... 97
Film Strip Facilitates Rapid Estimation of Wool Fiber Fineness ... 98
Proper Tensions and Lubrication Are "Musts" in Braiding ... 103
Automatic Starch Handling Equipment ... 105
Stop Motion Protects Fly Frame Gearing ... 107
Valve Maintenance ... 108
Remote Control for Mill Gate ... 111
Weaving Discussion (Alabama Meeting) ... 113
Stretch Oil and Grease Dollars ... 119
Dyeing Wool Stock, Tops, and Yarn, Article 4 ... 125
Operations Recorders Aid Full-Fashioned Production ... 131
Device Realigns Brush Rings on Leighton Knitter ... 135
Tool for Installation of Lower Cylinder Spring Band ... 137
Hosiery Operations Improve with Pedestal Mounted Loopers and Seamers ... 139

GENERAL and TECHNICAL

As Textiles Go, So Goes the Nation ... 73
Cotton Improvement in Georgia ... 73
To Remove Lint at Warpers ... 73
Wool Textile Quota Plan ... 73
Serviceability of Textiles Omitted ... 73
Standards for Rayon Fabrics ... 73
Radioactive Research ... 75
Industrial Engineering Institute ... 75
Avondale "Way of Life" Draws Praise ... 77
Italian Textile Missions Visit U. S. ... 77
New Dye Method for Synthetics ... 77
29th Annual AATCC Convention Plans ... 77
Standard Cotton Classing Conditions Wanted ... 77
Unions Entitled to Payroll Data ... 77
Nylon "Crepe" Constructions ... 77
New Synthetic Fiber ... 79
Pad Dyeing Patent ... 79
Instrument Determines Effective Wool Fiber Diameter ... 79
Plan Now to Attend Greenville Show ... 96
Instrument Maintenance Course Dates Announced ... 102
Textile School Planned for N. J. College ... 117
Study on Annual Reports in Textile Industry ... 117
Automatic Knot Tying Feature of Drum Winder ... 161
Safety Roving Truck ... 161
Venetian Blind Web Loom Features High Production ... 162
McGlynn Hays Spinner Improved ... 165
Continuous Measurement and Control of Nylon Size Viscosity ... 165
Electric Steam Generator for Loom Cleaning ... 168
Thread Guides with .020" Slots ... 168

HOW OTHER MEN MANAGE

Comments on Grinding Cards ... 155
Are Neps Like the Weather? ... 156
Collar Renews Loom Starting Rod Sleeve ... 156
Brushing Yarn at Slasher Aids Weaving ... 157
Painted Cans Identify Stock in Process ... 158
Soda Helps Humidification ... 158
Smoke Houses for Mill Employees ... 158
More on Reclaiming Filling ... 159
Sleeves on Rods Aid in Spinning ... 159

KNITTING SECTION

Operations Recorders Aid Full-Fashioned Production ... 131
Device Realigns Brush Rings on Leighton Knitter ... 135
Tool Aids Installation of Lower Cylinder Spring Bands ... 137
Hosiery Operations Improve with Pedestal Mounted Loopers and Seamers ... 139
Knitter Hints No. 33 (Pull Threads and Mending) 141
Dual Purpose Boarding Machine ... 143
Stop Motion Device Improves Safety ... 143
Stronger Markets for Underwear ... 144
Natural Fibers Remain Vital ... 144
Knitwear Novelties Confuse Buyers ... 149
An Eye on the Knitting Mills ... 151

DEPARTMENTS

News in Brief ... 73
An Executive Views the News ... 81
Future Events ... 83
Shorts and Remnants ... 85
How Other Men Manage ... 155
New Equipment and Materials ... 161
An Old Timer Says ... 175
Personal Notes ... 176
Suppliers' News ... 181
Free Booklet Section ... 185
What the Textile Mills Are Doing ... 196

Payment for contributed articles is made upon acceptance, before publication.

"Textile Industries" has the largest circulation among the mills of the United States of any textile publication

Maynard L. Durham
Business Manager

Business Representatives

ARTHUR C. SHAW, 11 Monroe Road, Wellesley Hills, Mass. (Wellesley 5-3648).
WILLIAM K. HOFFMAN, 58 Euclid Ave., Maplewood, N. J. (South Orange 2-2484).
L. E. ALLEN, Room 801, Security Bldg., 189 West Madison St., Chicago 2, Ill. (Andover 3-5469).
A. E. C. SMITH, 609 Caxton Bldg., Cleveland 15, Ohio (Cherry 1-7352).
J. D. PARSONS, 63 Barker St., Buffalo 9, N. Y. (Garfield 5532).
W. A. MCGEE, Box 562, Charlotte, North Carolina (3-4932).
W. CLIFF RUTLAND, Box 102, Gastonia, N. C. (7995).
LOYD B. CHAPPELL, Auditorium Bldg., 427 West 5th St., Los Angeles, California (Michigan 9849).
RODMAN HANSON, 708 Hendren St., Philadelphia 28, Pa. (Ivy Ridge 3-4176).

John C. Fonville
Editor

ASSOCIATES

J. Frank Guest
Milton C. May
H. B. Anderson
Hunter Hughes, P. O. Box 968, Rock Hill, S. C.
Paul M. Platzman, Great Neck, N. Y. Phone: 2-7310

CONSULTING EDITORS

F. Gordon Cobb
Ben H. Crawford
J. A. Moody
Production Manager

[Copyright, 1950, by W. R. C. Smith Publishing Co.]

Published Monthly at 115 E. Gordon Dalton, Ga.

By W. R. C. SMITH PUB. CO.

Editorial and Executive Offices
806 Peachtree St., N.E., Atlanta 5, Ga.

ANNUAL SUBSCRIPTION
U. S., CANADA, PAN-AMERICA—$2.00
FOREIGN—$5.00

Other Smith Publications

ELECTRICAL SOUTH
SOUTHERN HARDWARE
SOUTHERN POWER AND INDUSTRY
SOUTHERN AUTOMOTIVE JOURNAL
SOUTHERN BUILDING SUPPLIER

W. J. ROOKE, *Pres.*; R. P. SMITH, *Exec. V. P.*; T. W. MCALLISTER, *V. P.*; E. W. O'BRIEN, *V. P.*; A. E. C. SMITH, *V. P.*; O. A. SHARPLESS, *Treas.*; A. F. ROBERTS, *Sec.*; S. J. JONES, *Asst. Treas.*

ANNOUNCING...

"The Most Mechanically Perfect Spindle On The Market Today!"

Introduced at the recent Atlantic City Textile Machinery Show, the new H & B CENTURY Spindle has proven of major interest to the trade. Mill officials who have seen this new anti-friction spindle pronounce it "the most mechanically perfect spindle on the market today."

Important, too, is the cost factor. The CENTURY is competitive pricewise with any spindle now being offered. You pay no more for the outstanding performance features of the CENTURY.

Orders are now being placed for primary and complete installations. If you haven't seen this new spindle . . . if you want to see it in operation . . . then be sure to contact an H & B Sales Engineer. He'll have complete details about the spindle performance of the CENTURY!

*The CENTURY was named in a special Spindle Contest run in conjunction with the Textile Machinery Show and open to all executives and employees of established spinning, throwing and weaving mills. The $500.00 first prize was divided equally between:

J. L. Huggins, Pisgah Mills, Brevard, N. C., and

J. Colby Lewis, Gen'l Mgr., J & P Coats, (R. I.), Inc.

The H&B Century* ANTI FRICTION SPINDLE

- Strong, simple construction.
- All-steel base.
- 2 standard ball bearings.
- Exclusive plumbing feature. Easy to check and adjust by means of a double eccentric controlled by a knurled adjusting plug at the base of the spindle. No stopping the frame. No loss of production time.
- Packed with special grease for years of efficient operation.
- Eliminates dry spindles. Maintains desired R.P.M., promotes even twist.
- No bolster or blade wear.
- Longer tape life.
- Greater savings in H.P.
- Operates at any speed the work will stand.
- Eliminates the oil problem. No oily work or floors, etc.
- No friction—no heat.

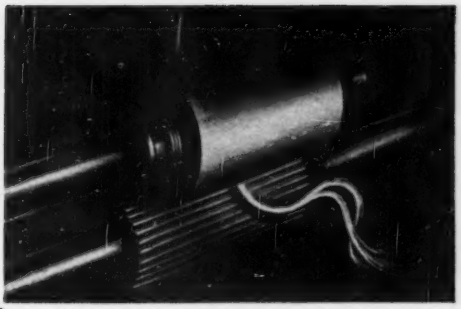
H&B AMERICAN MACHINE CO.

FACTORY, EXECUTIVE OFFICES AND EXPORT DIVISION • PAWTUCKET, R. I., U. S. A.

Branch Offices: Atlanta, Ga. — 810 Citizens and Southern National Bank Bldg.
Charlotte, N. C. — 1501 Johnston Bldg.
Greenville, S. C. — 1808-12 Woodside Bldg.

Builders of MODERN TEXTILE MACHINERY

SYTON reduces your wasteline, cuts down on ends down



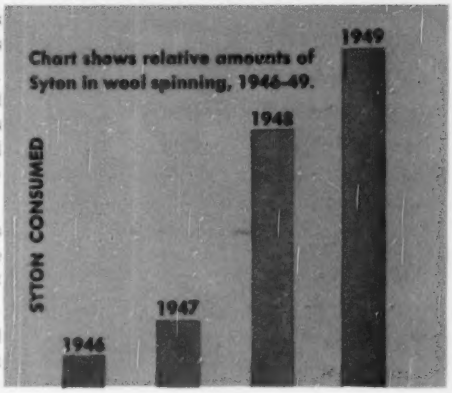
saves costly wool stock, cuts operating losses

No one knows better than you that wool's too precious to waste. At today's high prices for raw stock, waste bites deeply into profits.

That's why, from a cost standpoint, you'll be interested in the way Syton reduces waste. Syton strengthens ropings to provide fewer ends down both at the condenser and the unwinding of the jackspools. Some mills get 25% fewer ends down.

The result: More of your wool goes to cloth, and less to waste. And, just as important, you save time, trouble and operating expense by cutting down on the amount of wool you put back into roping.

So, look at Syton as one good antidote for high wool prices and high operating costs. You can cut your "tax rate" on ends down, and get other advantages, too.



other ways Syton pays

Syton commonly gives from 10%-to-30% more yarn strength. With added yarn strength, many mills . . . spinning carpet or knitting yarns, for example, reduce twist with Syton and hence boost production. Other mills get better roping condensation. Some mills spin blends hitherto impossible. Most mills report that Syton enables them to spin any given stock to a finer count. More for your wool dollar!

used on 38% of all wool spun in the U.S.

You don't take Syton on faith alone. It's well into the dividend-paying stage in many mills. Last year, for example, 38% of all woolen and worsted spun in the United States was spun with Syton. Syton will pay off in your mill, too.

Syton: Reg. U. S. Pat. Off.

for details or technical help, please send the handy coupon

MONSANTO
CHEMICALS – PLASTICS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

Monsanto Chemical Company, Textile Chemicals Dept.
Everett Station, Boston 49, Mass., Desk TIT 25

Please send me descriptive information on ☐ Syton.

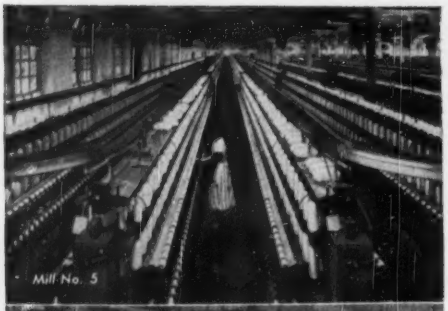
My attached letter requests technical information for my mill.

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____


Mill No. 5

Mill No. 3

Mill No. 6

Mill No. 4

PACOLET...

All spinning rooms in all the Pacolet Mills are equipped with SACO-LOWELL SPINNING FRAMES.

A PACOLET Trade Mark is a guarantee of good merchandise, efficient production, and co-operative labor. The entire Pacolet Group is another example of an intelligent year-by-year Saco-Lowellizing program, now successfully completed.

PACOLET today is operating 176,604 spindles with satisfaction and profit to personnel and management.

THE LIST IS GROWING!

The roster of quality-minded, cost-conscious, well managed mills using Saco-Lowell Spinning continues to grow, as mill after mill realizes that a Saco-Lowellizing program is a *dependable approach to profitable operations.*

Our engineers are at the service of mills interested in seeking to better their operating conditions.

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD, MAINE and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENVILLE • ATLANTA

Gates

REG. U. S. PAT. OFF.

Achieves the long-sought V-BELT DRIVE for LOOMS

For Cotton Mills and Rayon Mills

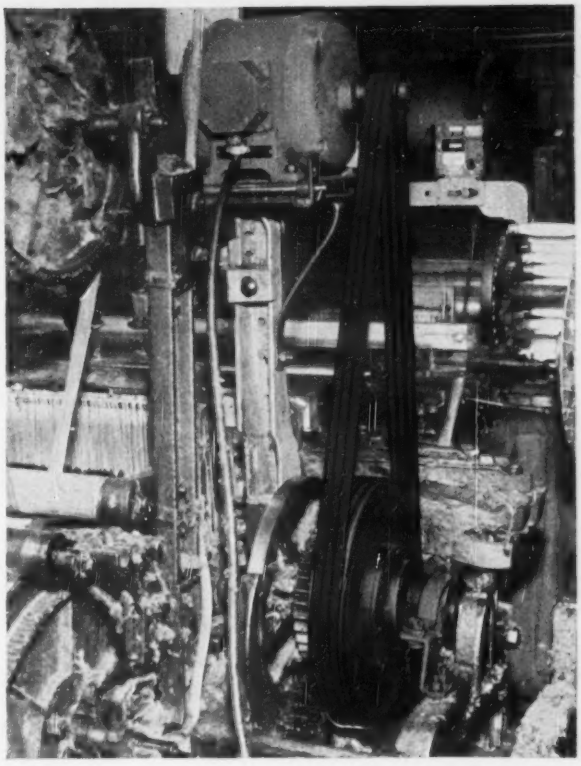
Loom operators had long *wanted* a V-Belt Drive for their looms. *But*—

Stubborn Difficulties

—stood in the way. Gates over-came these difficulties through *SPECIALIZED* research in the world's largest V-Belt testing laboratories, thus providing—

Another Accomplishment For Industry

by Gates *SPECIALIZED* Research



THE extremely small diameter of pulleys over which loom drive V-Belts must flex under severe shock-loads posed a problem in V-Belt construction that seemed *insurmountable*.

But, with war-born synthetic fibers of unusual strength; and with man-made rubbers possessing engineering properties never available before—and with the great research and testing facilities available at Gates—a V-Belt was achieved that met the rigorous conditions of loom drive operation.

Then, a clutch of very advanced design was wanted—a clutch that would do *more*, with *less* maintenance, and *fewer* troublesome adjustments than the clutches commonly used with gear and pinion drives on looms.

Gates therefore engineered a clutch that is a marked improvement over the clutches previously available for looms.

Finally—and this was most important, too—the entire drive assembly had to be so designed that it would go on the loom without any costly re-arrangement of existing mill equipment. This rather demanding job of design was also accomplished.

Today, the Gates V-Belt Drive for looms is cutting operating costs—and giving bigger loom output with better quality of cloth—in Cotton Mills and Rayon Mills the country over—another accomplishment of Gates *SPECIALIZED* Research!

ENG-505

THE GATES RUBBER COMPANY
The World's Largest Makers of V-Belts
DENVER, U.S.A.

GATES VULCO ROPE DRIVES
Engineering Offices and Jobber Stocks IN ALL INDUSTRIAL CENTERS of the U. S. and 71 Foreign Countries

ARE YOU GETTING THESE *Continuous Savings?*

THE NEW TYPE L BOBBIN CLEANER GIVES YOU

Lower

CLEANING COSTS

Speed 4000 to 6600 Quills per hour—handles a wide variety of quill designs and sizes for continuous filament, wool and worsted, many counts of spun rayon and cotton yarns.

Lower

REPLACEMENT COSTS

Waste is removed by jets of air and brushes—neither quill nor quill finish can possibly be damaged, greatly reducing quill cleaning costs.

Lower

LABOR COSTS

Return conveyor, shown above, is conveniently located within easy reach of feeding operator—any uncleaned quill is instantly spotted and passed back through the machine.

Lower

HANDLING COSTS

Bobbin Box Hoist and Conveyor System for handling quills around the Type L and moving them from one location to another cuts handling costs to a minimum.

The TERRELL MACHINE COMPANY, *Inc.*

CHARLOTTE, N. C.

TEXTILE BANKING COMPANY

Inc.

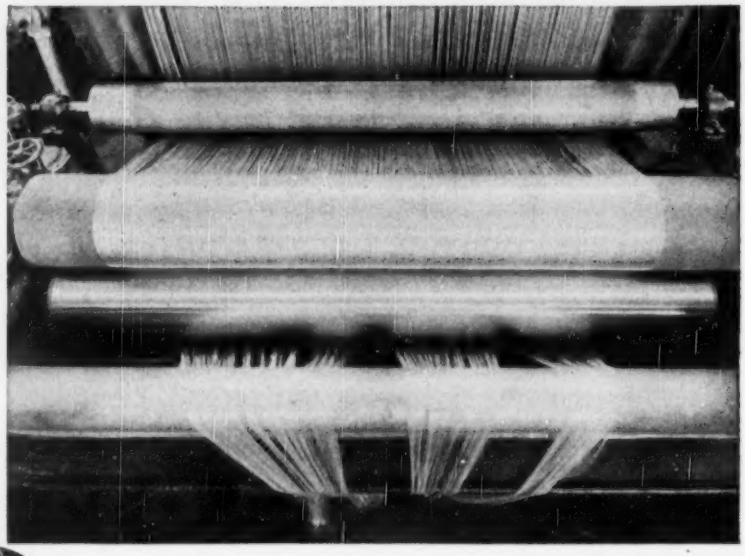
Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

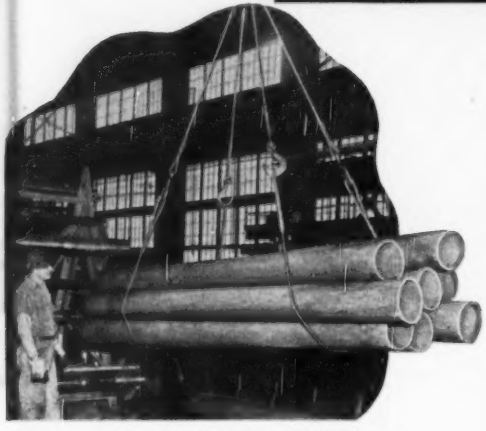
55 MADISON AVENUE • NEW YORK

Make Slasher rolls from Seamless MONEL tubing

The easy way!



Monel covering eliminated the need for frequent refinishing of these rayon slasher rolls. Rolls such as these can now be made from Monel extruded tubing subsequently machined to finished size.



Lifting a load of extruded tube shell at Inco's Huntington, W. Va. mill. Monel, Inconel, and Nickel seamless extruded tubing is now available in outside diameters up to 9¼".

Seamless extruded Monel tubing is now available in outside diameters up to 9¼", with wall thicknesses from ¼" to ⅝".

This means that you can make rustproof, corrosion-resistant slasher and other textile rolls easily and economically by machining the seamless tubing down to size. Monel® is readily machinable; will take and *keep* a smooth polish.

Monel is highly resistant to the destructive action of many dyehouse chemicals including all sizing compounds.

Cleaning is easy, too. Flushing with fresh water is usually all that is needed to keep Monel surfaces clean.

Whenever you need rolls . . . new or replacement . . . check with Inco. You may find that the newly available seamless extruded tubing will enable you to get *better* rolls at an economical cost.

For further information and quotations, write directly to Inco.

EMBLEM OF SERVICE

NICKEL (INCO) ALLOYS

Monel® • "K"® Monel • "R"® Monel • "KR"® Monel • Nickel "D"® Nickel • "L"® Nickel Inconel® • Duranickel® Permanickel® • Inconel "X"®

THE INTERNATIONAL NICKEL COMPANY, INC.

67 Wall Street, New York 5, N. Y.

®Reg. U. S. Pat. Off.

Keeps Yarn FREE from SNARLS

Insures LEVEL Shades

The SMITH-DRUM *Pulsating* Skein Dyeing Machine

This machine introduces, for the first time in this country, the pulsating or intermittent flow principle of skein dyeing.

OFFERS THESE MAJOR ADVANTAGES:

1. **Quality—**
   Yarn free from snarls and felting.
   Lofty handle of yarn.
   Uniform dyeing, even in extremely large lots.
   Complete change of liquor every 45 seconds.
2. **Economy—**
   Saves floor space, chemicals, dyestuffs, water and steam.
3. **Versatility—**
   Handles everything from coarse carpet yarn to finest worsted and cashmere yarns . . . in batches up to 3000 lbs.

{Licensed by Samuel Pegg and Son}

WRITE FOR OUR NEW CATALOG NO. PSD-806, WHICH FULLY EXPLAINS THE MANY ADVANTAGES OF THE PULSATING FLOW PRINCIPLE.

SMITH, DRUM & COMPANY

ALLEGHENY AVENUE AT 5th STREET, PHILADELPHIA 33, PA.

Celanese* Acetate Rayon
Gives You These Selling Extras

- A rich, full hand—perfect comfort with less weight
- Unlimited style effects through cross-dyeing
- Wrinkle-resistance for continued neatness—creases that keep their sharpness
- Moth, mold and mildew resistance
- High dimensional stability

They're Wrinkle-Resistant . . . *thanks to Acetate*

These days a man need no longer choose between a suit that's cool-but-wrinkled and a suit that's neat-but-hot. For Celanese* acetate staple fiber has made possible rayon suitings . . . firm, springy fabrics that stay neatly in-press right around the clock.

And this same Celanese staple also gives the booming summer suit business rayon fabrics that are dimensionally stable. It makes possible the beautifully and inexpensively styled, fancy, cross-dye patterns.

For *lively* rayon suitings and a *lively* summer suit business, make sure the fabrics you feature have a substantial Celanese acetate staple content.

Celanese Corporation of America, 180 Madison Avenue, New York 16. Available in Canada from Canadian Cellulose Products Limited, Montreal.

Celanese* **Staple Fiber of Acetate Rayon**

*Reg. U. S. Pat. Off.

ALSIMAG® CUSTOM MADE THREAD GUIDES

U. S. PATENT NO. 2,214,703 AND OTHER CLAIMS PENDING

can be REFINISHED

An Exclusive AlSiMag Advantage

and a BIG BONUS FOR YOU

FINISHES: All AlSiMag Guides are available in either Bright or Satin finish. You may wish to test both finishes in your mill to see which finish performs best for you. Special finishes may be developed through cooperation with our engineers.

REFINISHING: Used AlSiMag guides can be returned to us for refinishing. Any grooves will be removed by grinding. Your AlSiMag guides will be returned to you with the original finish, either Bright or Satin. Usually there is no significant change in size. Size change depends on how much stock must be ground away to remove the groove. Cost of refinishing is a fraction of the original cost.

LONG LIFE: It is not unusual for us to receive reports of AlSiMag Guides that have given more than 100 times the life of the best guides formerly used. AlSiMag Guides are HARD, HOMOGENEOUS. But even the hardest guide will eventually groove if you are running fine denier abrasive yarns at high speed, high tension. If your AlSiMag Guides ever develop grooves, you will find the new surfaces of this homogeneous material exactly as hard and smooth as the original surface. In some instances, grooves are not objectionable. But if your guides would be improved by refinishing, they can be returned to us and refinished at small cost.

TEST SAMPLES: AlSiMag Guides in sample quantities can be made to your specifications at reasonable cost. Thus you can inexpensively test your design ideas. Let your own production and cost records prove that AlSiMag Guides are far lower in cost per pound of yarn produced.

ALSIMAG ® 192 Guides are non-conductors.

ALSIMAG ® 193 Guides conduct electricity. Properly grounded, they bleed off static.

AMERICAN LAVA CORPORATION

49TH YEAR OF CERAMIC LEADERSHIP

CHATTANOOGA 5, TENNESSEE

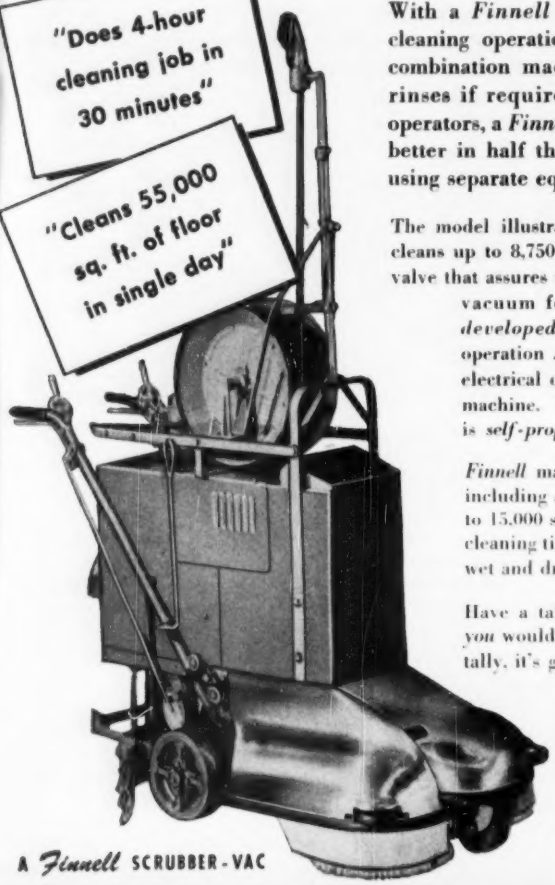
OFFICES: METROPOLITAN AREA: 671 Broad St., Newark, N. J., Mitchell 2-8159 • CHICAGO, 9 South Clinton St., Central 6-1721
PHILADELPHIA, 1649 North Broad St., Stevenson 4-2823 • LOS ANGELES, 232 South Hill St., Mutual 9076
NEW ENGLAND, 38-B Brattle St., Cambridge, Mass., Kirkland 7-4498 • ST. LOUIS, 1123 Washington Ave., Garfield 4959

"Cuts our cleaning costs more than $1200 annually"

"Cleans floor area size of city block in 6½ hours"

"Does 4-hour cleaning job in 30 minutes"

"Cleans 55,000 sq. ft. of floor in single day"



A *Finnell* SCRUBBER-VAC

OTHERS SAVE ON LARGE-AREA SCRUBBING ... Why Not You?

Now especially, with the need for cutting costs, savings such as are possible with a *Finnell Scrubber-Vac* are well worth investigating.

With a *Finnell Scrubber-Vac*, all four of the floor-cleaning operations can be done mechanically! This combination machine applies the cleanser, scrubs, rinses if required, and picks up. With one or two operators, a *Finnell Scrubber-Vac* can do a cleaning job better in half the time it takes a crew of six to eight using separate equipment for the several operations.

The model illustrated below, for heavy duty requirements, cleans up to 8,750 sq. ft. per hour. Has new type of water valve that assures uniform flow of water ... ⅓ more powerful vacuum for more efficient pickup ... a *Finnell-developed* trouble-free clutch, affording effortless operation ... improved waterproof wiring and fewer electrical connections, simplifying the cleaning of the machine. Vacuum performs *quietly*. The machine is *self-propelled*.

Finnell makes a full line of combination machines, including a model for small-area buildings with 2,000 to 15,000 sq. ft. of floor space. This machine reduces cleaning time approximately two-thirds! Handles *both* wet and dry work.

Have a talk with *the nearby Finnell man*. See what *you* would save with a *Finnell Scrubber-Vac*. Incidentally, it's good to know that when you choose *Finnell Equipment*, a *Finnell* man is available to help train your maintenance operators in its proper use. For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1308 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Pioneers and Specialists in

FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES IN ALL PRINCIPAL CITIES

fresh approach to flannels

Softer, lighter flannels coming up—flannels woven with TECA, Eastman's talented acetate fiber.

TECA puts new softness in these fabrics, makes them less subject to soil, more efficient at shedding wrinkles. Because TECA is thermoplastic, it preserves a fresh-pressed appearance in garments. Because it is highly shrinkage resistant, it contributes to ease of cleaning.

Flannels with a high TECA content are good news for men's and women's sportswear. And they have the "extra" that makes extra sales—a famous fiber trade-mark to feature.

For information about TECA, consult A. M. Tenney Associates, Inc., 10 East 40th St., New York, sales representatives for Tennessee Eastman Corporation.

Tennessee Eastman Corporation

(Subsidiary of Eastman Kodak Company)

KINGSPORT, TENNESSEE

TECA*

fiber

* *TECA is an Eastman trade-mark. It identifies a short, crimped fiber made by Eastman from cellulose acetate—a fiber otherwise known as estron or acetate rayon staple. There is only one TECA fiber.*

Back of Tomorrow's Fashion Shows...

in Rayons, Nylons, Acetates, Combinations and Pure Silks

S-1... S-3... S-4... S-6

C&K's S-Family includes the world's most modern looms for weaving synthetics and pure silks . . . all widths . . . 2 x 1 . . . 4 x 1 . . . 4 x 4 . . . bobbin changing . . . shuttle changing . . . dobby . . . jacquard . . . call box . . . filling mixing . . . pick and pick . . . many shuttle sizes . . . precision letoff . . . 30" beams . . . vacuum filling control . . . roller bearings . . . center filling fork . . . electric warp stop motion . . . mechanical warp stop motion . . . batwing picking . . . floating binders . . . swing reed . . . multipliers . . . silk takeup.

In this field of fabrics, C&K S-Looms are unmatched for range of fabric constructions and for high quality of fabric. And on all other types of woven fabrics, other families of C&K Looms are available to protect the profit-positions of modern-minded weaving mills. *See C&K!*

C&K's "Conference Corner"

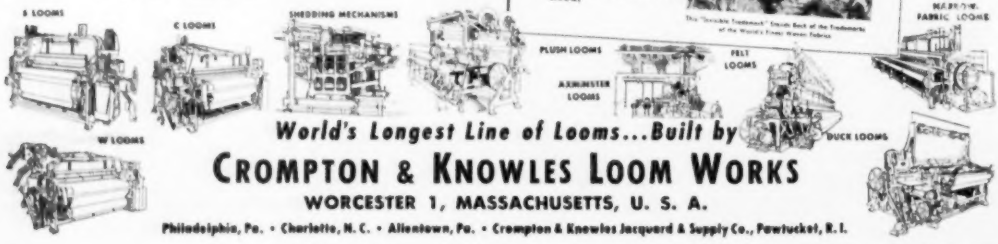
"Modernize — *or else.*" That was the counsel of a top news magazine after a tour of the Atlantic City Show. And today's stiffening competition in synthetics . . . as well as in all other types of fabrics, from ribbons to rugs . . . strongly underscores C&K's counsel of the last 25 years: "Modernize . . . but modernize by small steps . . . for small steps are easy." *Each year, replace at least 10% of your least efficient looms.*

No matter what your weaving problem, C&K engineers are ready to work with you on a Modernization Program that will keep you competitive in the most competitive textile market of all times. See C&K.

...and a word about PARTS & SUPPLIES

Interchangeable parts for *all* C&K Looms are available *only* from C&K. And this means *non-stock parts*, as well as the more common items which are stocked in anticipation of your orders. Order all C&K Loom parts direct from the Loom Works. For then you can *always* be sure of getting *anything* you need.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics



World's Longest Line of Looms...Built by

CROMPTON & KNOWLES LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

SANDOZ PRESENTS *The color achievement of the month*

Thoroughbreds ...BY RIEGEL

There's a lot of *lasting* power in these work and play garments made from Riegel Fabrics . . . and there's a lot of lasting power, too, in colors direct-dyed by CUPROFIX.

This new inexpensive after-treatment — used by Riegel and other leaders — gives direct-dyed cotton and rayon fabrics a high degree of *wash* and *perspiration* fastness without expense of vat dyes. And — unlike other "fixes" — CUPROFIX maintains fastness to *light*.

Adding CUPROFIX to the resin bath increases fastness to washing sufficiently to permit labeling garments "washable" instead of just "dry cleanable". It also

materially increases efficiency of the usual resin treatment

eliminates in many cases the effect of the resin on light fastness

Outstanding members of the CUPROFIX series are:

CUPROFIX Yellow GLE
CUPROFIX Orange GL R Conc
CUPROFIX Red 6BL
CUPROFIX Bordeaux BL
CUPROFIX Rubine BL
CUPROFIX Violet 2BL
CUPROFIX Blue FGL - 4GL - 2GL
LUL - RUL - Navy Blue G Conc - SL
CUPROFIX Green BL
CUPROFIX Brown GL - B Ex Conc - BG
CUPROFIX Black C Conc
CUPROFIX Grey R

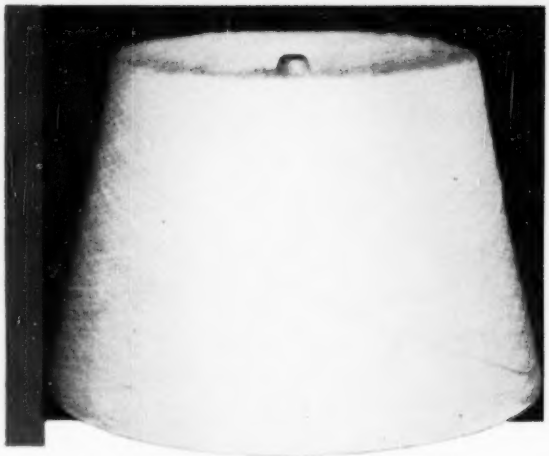
There are still *more* CUPROFIX advantages — for both mill and consumer. Write us for Booklet U. S. 125.

And for any chrome, acid or direct dyes . . . or auxiliary chemicals . . . and for both natural and synthetic fibres . . . be guided by the successful "color achievements" you see in these Sandoz advertisements.

SANDOZ CHEMICAL WORKS, INC., 61 VAN DAM STREET, NEW YORK 13, N. Y.

Application laboratories and stocks at Boston, Philadelphia, Charlotte, Chicago, Los Angeles, Toronto • Other branches at Providence, Paterson and Montreal

SANDOZ *thinks ahead with textiles*

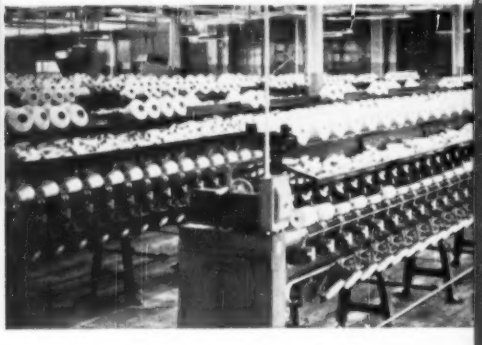


This is spun nylon. Density of the cone is uniform and minimum throughout, with no hard ends. Underwinds are eliminated. There are no roll-cuts.

But whether the yarn is spun nylon, spun rayon, cotton, worsted or any other staple fibre, soft or abrasive . . . to be dyed, twisted, warped or knitted . . . the packages wound on the Roto-Coner* winder look as well, perform as well, on the next operation.

wind High-Quality *packages*

on the Low-Cost *winder*



The high winding speed of this drum winder means more, lower-cost production. Efficient yarn inspection improves quality and saves the expense of interrupted production later on. And, since the exclusive rotary traverse eliminates cams and reciprocating guides, repairs are slight; maintenance averages ½-1% a year on investment.

Investigate the Roto-Coner* winder, selected more often than any other for modern installations. The size of the supply package is not limited, and the winder can be equipped for a variety of work by means of special attachments.

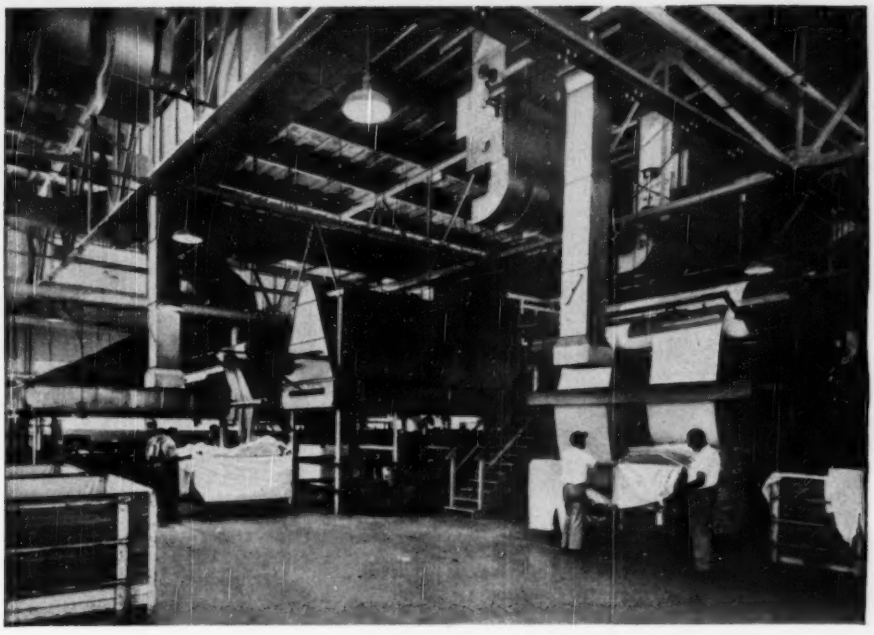
UNIVERSAL WINDING COMPANY

P. O. Box 1605 • Providence 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

ROTO-CONER WINDER* *The Textile Winder with the Rotary Traverse*



This dyehouse is dry the year round

Only Carrier Offers This Full Line of Fuel Savers

CARRIER 46PQR HEAT DIFFUSERS, with multiple outlets and adjustable louvers. Floor, wall or ceiling mounted. Capacities from 115,000 to 1,570,000 Btu per hour.

CARRIER 46S FOUR-WAY DIRECTED-FLO UNIT HEATER, ceiling suspended, with steam or hot water. Capacities from 49,000 to 500,000 Btu per hour.

CARRIER 46T GAS-FIRED UNIT HEATER, with heart of Aluminized Steel. Capacities from 70,000 to 230,000 Btu per hour.

CARRIER 46U HORIZONTAL DISCHARGE UNIT HEATER, sturdy and attractively styled, with steam or hot water. Capacities from 13,400 to 200,000 Btu per hour.

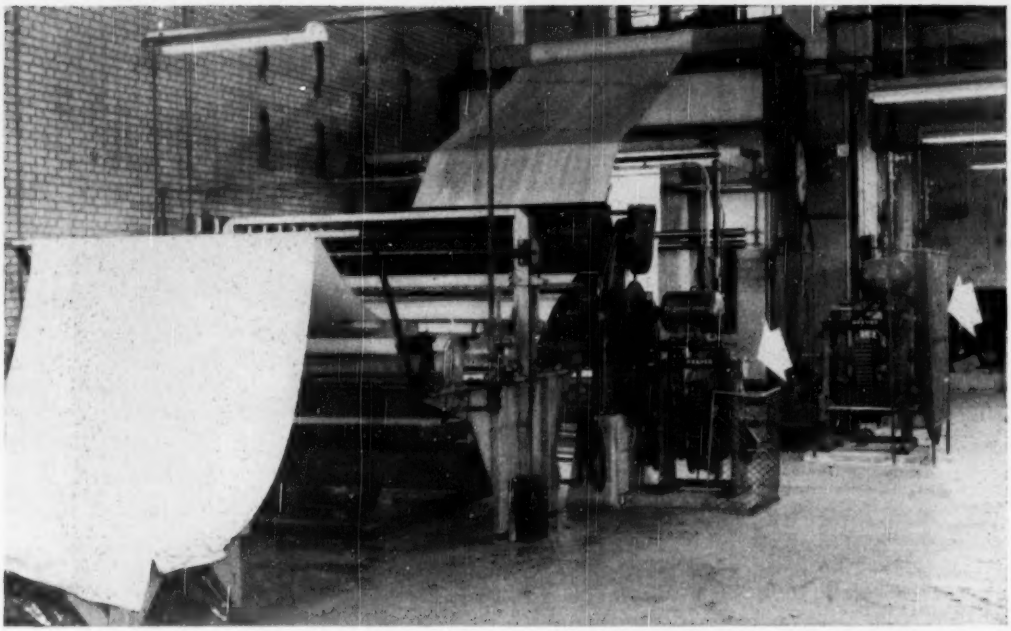
HERE's the dyehouse of a southern mill that's never bothered with fog. And the walls never drip with condensate. It's equipped with Carrier Heat Diffusers.

Carrier's scientifically designed Heat Diffusers bring in outside air, heat it to the desired temperature and distribute it to every corner. The dyehouse is always clear of vapor clouds—damaging condensate is eliminated.

These easily installed standard units are equally profitable in other parts of the mill. They provide even, accurately controlled heat, eliminate cold corners and save fuel. Adjustable louvers permit distribution of heated air in any direction. Capacities range from 115,000 to 1,570,000 Btu per hour.

Carrier Heat Diffusers reach you completely assembled—ready for quick installation. The Carrier name—long the symbol of leadership in air conditioning—is your assurance of dependable service and low-cost heat. Carrier Corporation, Syracuse, N.Y.

Carrier AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING



Above is the new Hunter Unishrink Drying Unit, custom-built by the James Hunter Machine Co., North Adams, Mass., for the Geltman Sponging Corp., Cleveland, Ohio. Squeeze rolls and dryer are synchronized, and even tension maintained, by two open-type, vertical REEVES Variable Speed Transmissions (indicated by arrows). REEVES unit on squeeze rolls, foreground, has handwheel control and Transmission on dryer, background, has push-button control. Push-button station for latter unit is located over Transmission in foreground, permitting one operator to control both REEVES units. Machine has capacity of up to 30 yards per minute, and is equipped with electric eye so that goods may run with proper relaxation.

Whatever your speed control problem— REEVES provides the proved solution

In these days of sky-high manufacturing costs, more and more textile mill operators are turning to the *tried and proved* method of variable speed control—REEVES!

Applied to any speed control problem and almost every type of machine used in the preparation, fabrication, spinning, twisting or finishing of yarn or cloth—accurate, positive, infinitely variable REEVES Speed Control assures uninterrupted, high-speed production of finest, uniform quality.

No matter how fast or how frequently operating conditions may change—due to variations in texture, weight, temperature, moisture content or operator skill—the *exact* speed to perform each operation most efficiently can be obtained *instantly* with REEVES—without time-consuming stops or slow-downs.

The complete REEVES line is built around three basic units . . . all manufactured in a wide range of designs, sizes, capacities and speed ratios, with a choice of manual, electric remote, mechanical or completely automatic control. A REEVES engineer who knows textile mill operations from A to Z will be glad to talk with you regarding your particular speed control requirements. Write for his name, and for your *free* copy of the new 132-page catalog T51-3N.

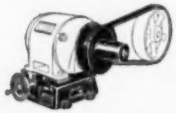
REEVES PULLEY COMPANY • COLUMBUS, INDIANA

Recognized leader in the specialized field of speed control engineering

accurate · variable **REEVES** *Speed Control*

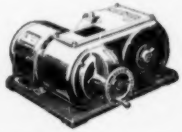
The 3 Basic REEVES Units

VARIABLE SPEED TRANSMISSION for providing infinite, accurate speed flexibility over a wide range—2:1 to 16:1. Sizes—fractional to 87 hp.



VARI-SPEED MOTOR PULLEY provides an instantly variable speed drive within 4:1 ratio for any constant speed motor. Sizes to 10 hp.

MOTODRIVE combines motor, speed varying mechanism and reduction gears in a single unit. Speed variations 2:1 to 6:1, inclusive. Sizes to 20 hp. (Also available in fractional hp sizes with speed variations of 10:1.)



BETTER

No matter what type of dyeing machine you need Van Vlaanderen makes it.

Better production and better quality of finished fabric are synonymous with the name

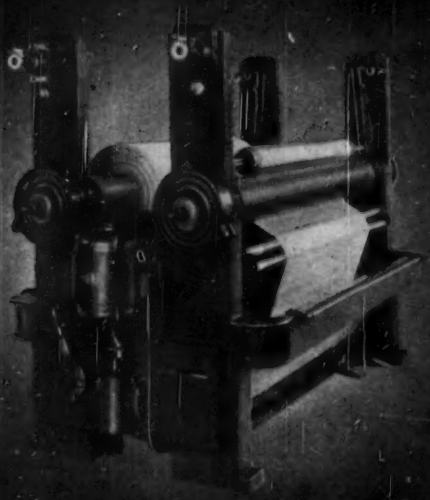
VAN VLAANDEREN

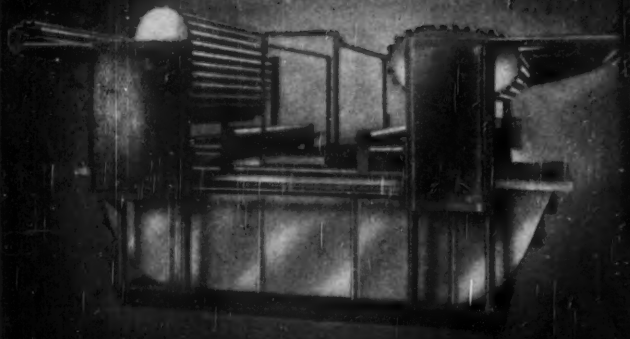
MACHINE COMPANY

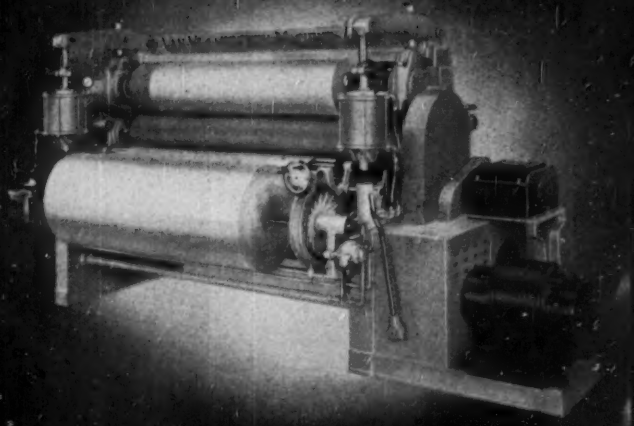
870 STRAIGHT STREET

PATERSON 3, NEW JERSEY

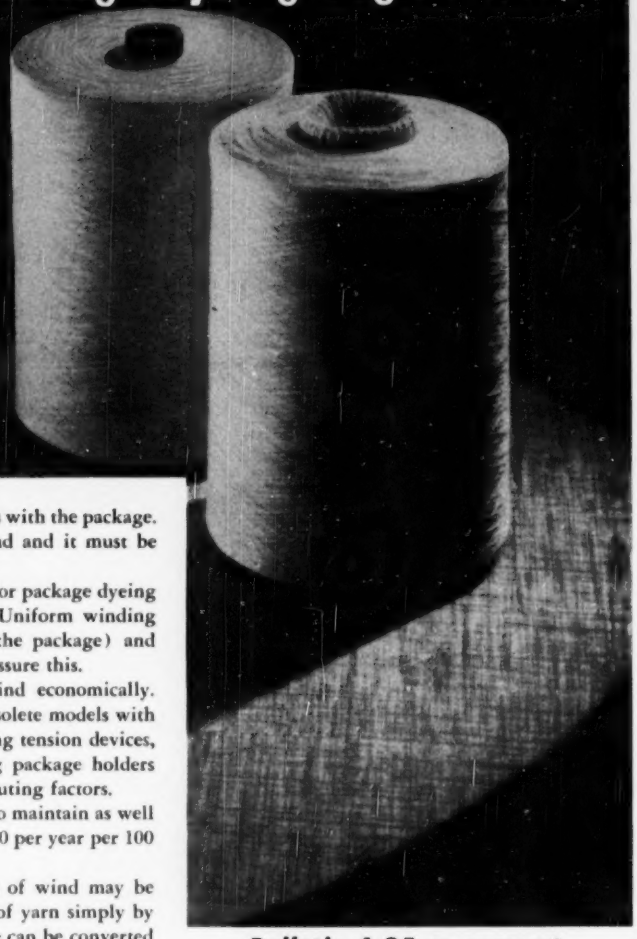
World's largest manufacturer of machinery for processing modern fabrics







Efficiency in Package Dyeing Begins With *the Package*



EFFICIENCY in package dyeing begins with the package. The latter must be *properly* wound and it must be *economically* wound.

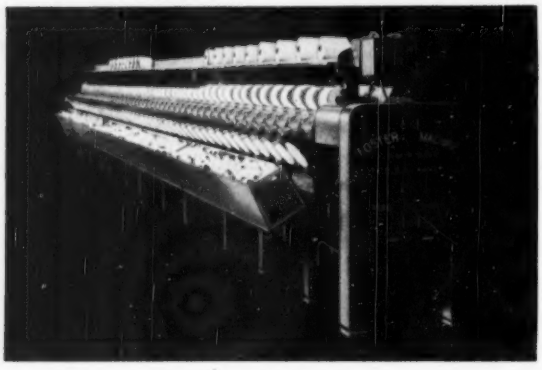
Foster Model 102 Packages are ideal for package dyeing because they are of uniform density. Uniform winding speed (regardless of the diameter of the package) and accurate tension and pressure controls assure this.

Foster Model 102 machines also wind economically. They will produce twice as much as obsolete models with only $\frac{2}{3}$ the operating cost. Self threading tension devices, empty bobbin conveyors, quick-doffing package holders and automatic stop motions are contributing factors.

The Foster Model 102 is economical to maintain as well as to operate. Repairs run as low as $3.50 per year per 100 spindle machine.

Flexibility is another feature. Angle of wind may be varied to accommodate different types of yarn simply by changing 4 small gears and the machine can be converted to wind cones or tubes at relatively small expense.

Bulletin A-95 on request



FOSTER MACHINE CO.

WESTFIELD, MASSACHUSETTS

Southern Office: Johnston Building, Charlotte, N. C.; *Canadian Representative:* Ross-Whitehead & Co., Ltd., University Tower Building, 660 Saint Catherine Street West, Montreal, Quebec.

European Representative, Muschamp Taylor, Ltd. Manchester, England

FOSTER

· MODEL 102 ·

For Winding Cotton, Mercerized, Wool, Worsted, Merino, Spun Silk, or Spun Rayon Yarns.

70% of all rayons

are processed in plants that use

AHCOVELS

here's why

AHCOVELS are *substantive* softeners that meet exacting finishing requirements for rayon, cotton, wool, linen and synthetic fabrics.

AHCOVELS are odorless and will not "yellow" whites.

AHCOVELS are permanently resistant to usual laundering and dry cleaning processes.

AHCOVELS are stable under extreme heat.

AHCOVELS E, F and R are both *anionic* and *substantive*. They assure full retention of light fastness in dyed fabrics and are compatible with anti-fume agents.

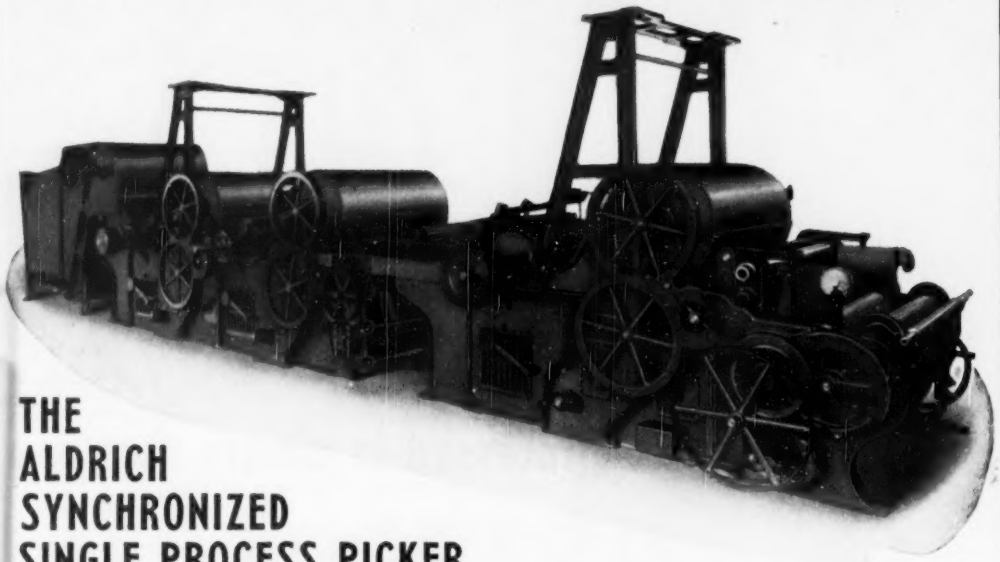
For economy . . . finer finishes . . .
softer drape and hand . . . use AHCOVELS.

ARNOLD-HOFFMAN
Providence, Rhode Island

Additional information or recommendations on specific finishing problems will be supplied through any of our offices.

ARNOLD-HOFFMAN & CO. INCORPORATED • EST. 1815 • PROVIDENCE, RHODE ISLAND
Plants at Dighton, Mass.; Charlotte, N. C.; Cincinnati, Ohio; Offices: Providence; New York; Cincinnati; Philadelphia; Charlotte

FOR MAKING EVENER CARD SLIVER



THE ALDRICH SYNCHRONIZED SINGLE PROCESS PICKER

A true single-process picker, in which the finisher section is fed with a smooth, well-formed lap from the breaker section, instead of with loose cotton from a gauge box or hopper feeder. The Aldrich Synchronizer controls the feed from the breaker section to deliver the lap exactly as required by the finisher.

This makes a lap which is not only quite even yard by yard, but unusually even in every direction throughout the lap. Such a lap will make a very even card sliver.

The feeder on the Aldrich picker is equipped throughout with permanently lubricated ball bearings, which never require attention.

The Aldrich picker has all possible parts in the evener mounted on ball bearings for extreme sensitivity.

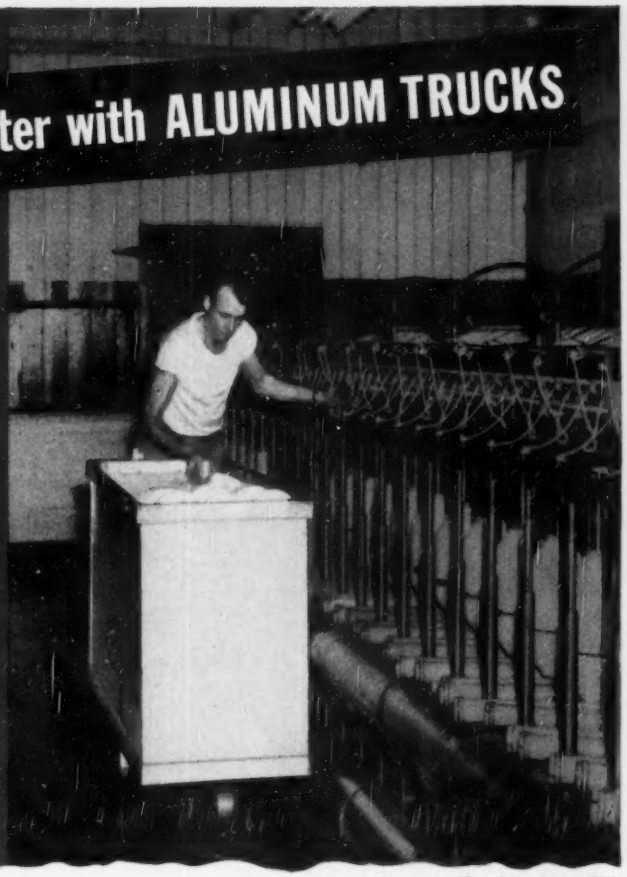
The Aldrich picker is equipped with a new and improved, completely silent, sideshaft drive to the evener.

AldricH MachinE

Greenwood WorkS South Carolina

Handle roving faster with ALUMINUM TRUCKS

- *light weight*
- *non-staining*
- *no red rust*
- *eliminates painting*
- *high strength*
- *non-splintering*



Courtesy of Exposition Cotton Mill

Your workers can push trucks of Alcoa Aluminum with their knees. Both hands are free to doff full bobbins and replace empty ones. Your production increases. Workers like the effortless way they handle. Where corrosive atmospheres rust steel, aluminum doesn't even require painting. These long-lasting trucks never rust-streak yarns. Never raise splinters to tear fabrics or injure workers' hands. You'd expect to pay much more for trucks of Alcoa Aluminum. But the cost is right in line with wood and steel trucks. Exposition Cotton Mill is a typical organization that is including aluminum handling trucks in their modernization plans.

Like to know who makes trucks of Alcoa Aluminum? Mail the attached coupon to: ALUMINUM COMPANY OF AMERICA, 990H Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA
FIRST IN
ALUMINUM

Gentlemen:

Please send a list of manufacturers who are making textile trucks of Alcoa Aluminum.

Name _____

Title _____

Company _____

Address _____

Photo courtesy Celanese Corporation of America. Yarn content: Warp — Celanese acetate rayon dull filament; Filling — Celanese acetate rayon bright staple.

A DURABLE GAS-FADING INHIBITOR

ARIPERM P M

Gives fabrics composed partially or wholly of

Acetate Rayon

— lasting protection against fading from atmospheric gases

— with excellent resistance to *WASHING AND DRY CLEANING*

Recommended for dyeing Light Shades, Pastels & Tints as well as medium and heavy shades.

With Ariperm P M there is no appreciable yellowing effect on white goods when exposed in the gas chamber — relatively little effect on light fastness of the color.

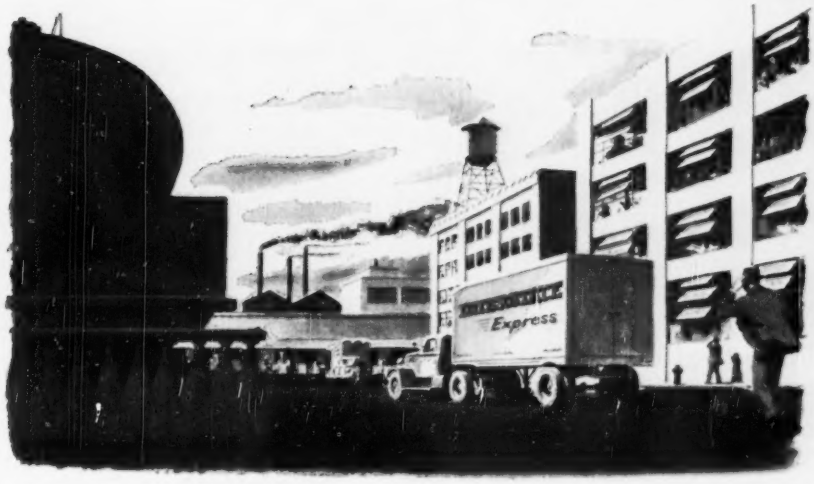
Simple application in scouring or directly in the dye bath.

Write for Technical Service Bulletin #201-121.1

Arkansas Co. INC.

NEWARK, NEW JERSEY

The wind no longer blows up costs —thanks to Gulf Sani-Soil-Set



ONE OF THE MANY WAYS INDUSTRY MAKES DOLLAR SAVINGS WITH GULF OILS AND GREASES

Some years ago the summer winds literally blew up costs in a New England manufacturing plant. Dust from plant grounds caused excessive wear in precision machines, upped cleaning expense, and contaminated employees' food in the cafeteria.

That was before Gulf Sani-Soil-Set took over the job of dust control. After just one application of this outstanding compound—no dust annoyance for the entire summer season! A clean, fresh surface on plant grounds and parking areas. And, no "tracking" into halls and offices.

Gulf Sani-Soil-Set may be the answer to *your* problem of controlling dust outside the plant. Send today for your copy of the booklet "Gulf Sani-Soil-Set — the modern agent for controlling dust."

Gulf Oil Corporation · Gulf Refining Company
GULF BUILDING, PITTSBURGH, PA.
Sales Offices - Warehouses
Located in principal cities and towns throughout Gulf's marketing territory

GULF INDUSTRIAL LUBRICATION

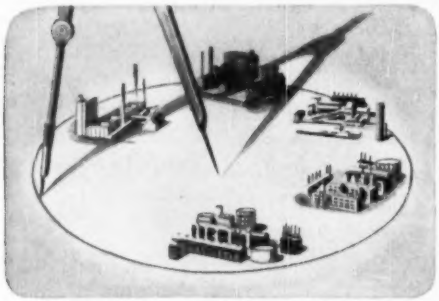
HELPS MAKE MACHINES PRODUCE MORE AT LOWER COST

Look for the hidden "extras"

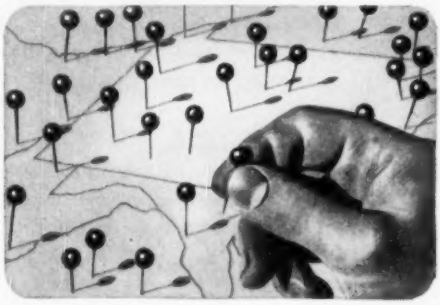
When you specify Solvay in ordering chemicals, you get many advantages that may not be immediately obvious. These hidden "extras" help make your business operate more smoothly, more efficiently . . . and, in many cases, more economically.

1 TO HELP YOU WORK out problems—and to offer advice on the proper use, handling and storing of alkalies—there's Solvay "Industry-Wise" Technical Service . . . a corps of skilled technicians with expert knowledge of individual industries, including *your* industry.

2 SOLVAY'S LONG EXPERIENCE as America's first alkali manufacturer—totaling almost seven decades—assures you of chemical products *exactly* the way they should be.



3 SOLVAY'S FIVE HUGE plants—situated where American industry is centered—guarantees a steady supply of the materials you need.



4 THE CONVENIENT, coast-to-coast locations of Solvay's 200 sales offices and warehouses make prompt delivery another feature.

SOLVAY

TRADE-MARK REG. U.S. PAT. OFF.

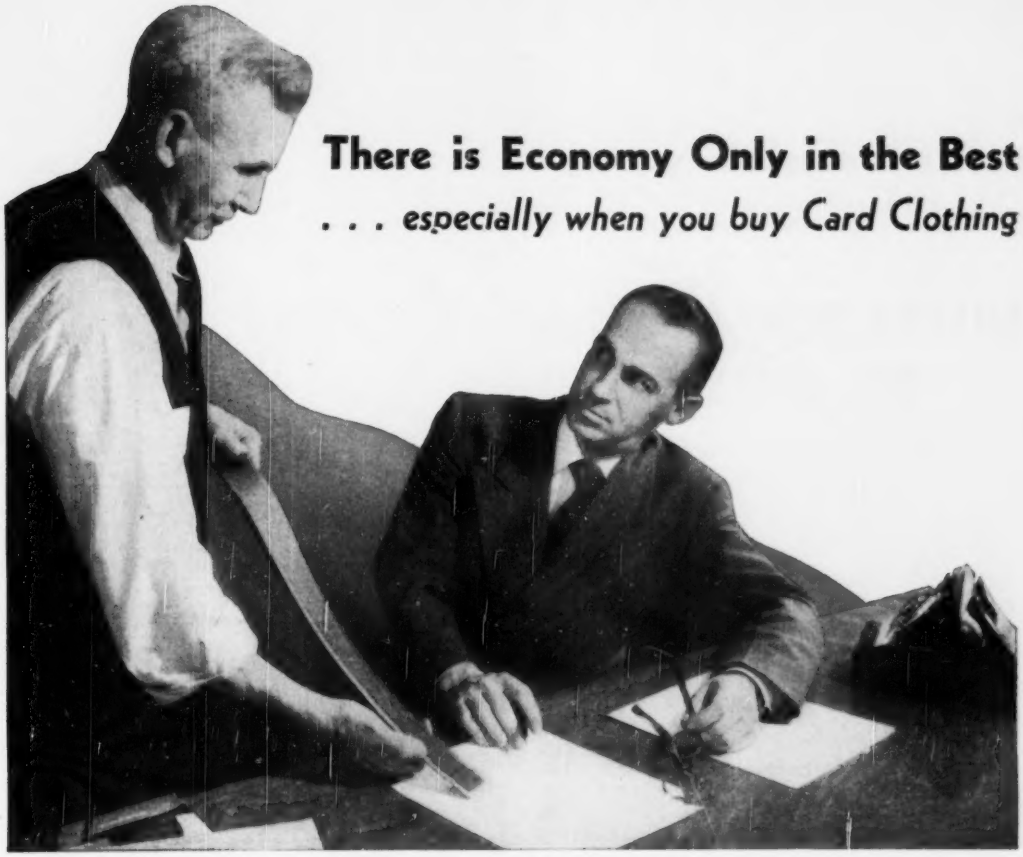
Soda Ash • Caustic Soda • Caustic Potash • Chlorine • Potassium Carbonate • Calcium Chloride • Nytron • Sodium Bicarbonate Specialty Cleansers • Ammonium Bicarbonate • Sodium Nitrite Para-dichlorobenzene • Ortho-dichlorobenzene • Methanol Monochlorobenzene • Ammonium Chloride • Formaldehyde

SOLVAY SALES DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 Rector Street, New York 6 N. Y.

Boston • Charlotte • Chicago • Cincinnati • Cleveland
Detroit • Houston • New Orleans • New York
Philadelphia • Pittsburgh • St. Louis • Syracuse



There is Economy Only in the Best

. . . especially when you buy Card Clothing

Overseer... Nothing is so important to me, Mr. Jones, as having the very best card clothing on our machines. I'll grant you have a large investment in floor space and cards . . . *but the actual work is done by the card clothing.* We must have the best!

Mr. Jones... That's right, Sam—and the difference in cost between the best and second best card clothing is very small compared to our total outlay.

Overseer... And using the best makes a whale of a difference in operating efficiency and return on your total investment. That's why I'm for TUFFER CARD CLOTHING every time. It's the most uniform and most accurate card clothing we can use . . . and it keeps carding costs down where they should be!

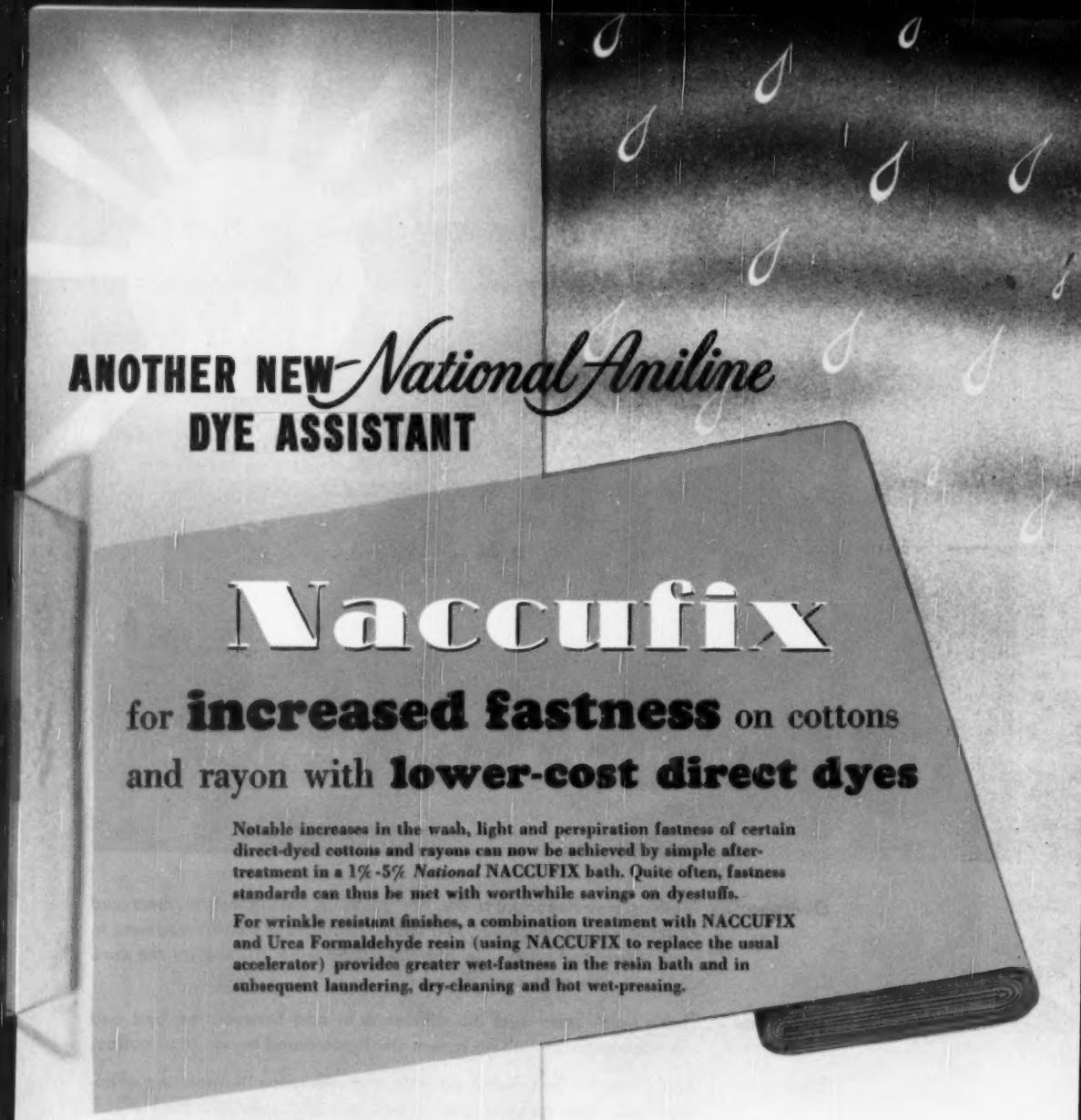
HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.

Branches: Philadelphia, Pa. and Blanco, Texas *Direct Representation in Canada*

TUFFER CARD CLOTHING

IMPROVES PRODUCTION ALL ALONG THE LINE



ANOTHER NEW *National Aniline* DYE ASSISTANT

Naccufix

for **increased fastness** on cottons and rayon with **lower-cost direct dyes**

Notable increases in the wash, light and perspiration fastness of certain direct-dyed cottons and rayons can now be achieved by simple after-treatment in a 1%-5% *National* NACCUFIX bath. Quite often, fastness standards can thus be met with worthwhile savings on dyestuffs.

For wrinkle resistant finishes, a combination treatment with NACCUFIX and Urea Formaldehyde resin (using NACCUFIX to replace the usual accelerator) provides greater wet-fastness in the resin bath and in subsequent laundering, dry-cleaning and hot wet-pressing.

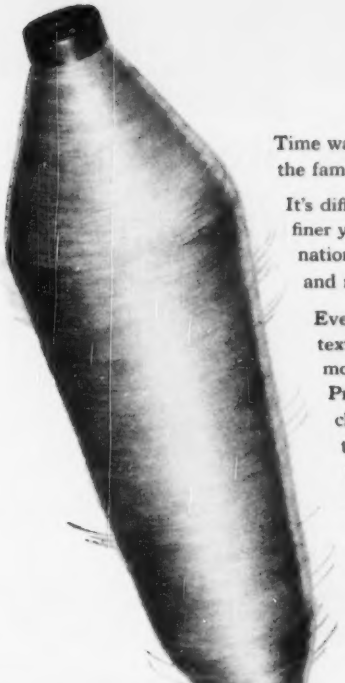
Write, wire or phone our nearest office for application data and matches made with the National Direct Colors recommended for use with NACCUFIX.

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET, NEW YORK 6, N.Y. • BOwling Green 9-2240

Boston 14, Mass., 150 Causeway St.	CApitol 7-0490	Richmond 19, Va., 8 North Fifth St.	Richmond 2-1930
Providence 3, R.I., 15 Westminster St.	DExter 1-3008	Columbus, Ga., Columbus Interstate Bldg.	Columbus 3-1029
Philadelphia 6, Pa., 200-204 S. Front St.	LOmbard 3-6382	Greensboro, N.C., Jefferson Standard Bldg.	GReensboro 2-2518
San Francisco 5, Cal., 517 Howard St.	SUtter 1-7507	Chattanooga 2, Tenn., James Building	CHattanooga 6-6347
Portland 9, Ore., 730 West Burnside St.	Beacon 1853	Atlanta 2, Ga., 140 Peachtree St.	CYpress 2821
Chicago 54, Ill., The Merchandise Mart	SUperior 7-3387	New Orleans 12, La., Cotton Exchange Bldg.	Raymond 7229
Charlotte, 1 N.C., 201-203 West First St.	CHarlotte 3-9221	Toronto 2, Canada, 137-143 Wellington St. W.	Elgin 6495



Time was, you remember, when housewives not only made the family's clothes, but spun the thread as well.

It's different today. Twenty million spindles help spin finer yarns for fabrics that clothe, shelter and comfort the nation and the world. They spin smoothly, too . . . faster and more profitably on modern SKF anti-friction bearings.

Ever since 1904, SKF has anticipated the needs of the textile industry for higher speeds, lower power consumption, more uniform and consistently dependable production. Progressive textile mill men know that for every changeover—not only on spindles but on pickers, cards, tension pulleys, in fans, motors or wherever shafts turn,—there are good reasons why they can depend on real help from SKF bearing engineers. Equipment manufacturers, too, not only in textile machinery but in *all* industry, recognize SKF engineering as the pioneering kind. **SKF** INDUSTRIES, INC., PHILADELPHIA 32, PA., *the Pioneers of the Deep-Groove Ball Bearing, Spherical Roller Bearing, Self-Aligning Ball Bearing.*

7032

SPINNING SPINDLES
. . . SPIN A GOOD YARN

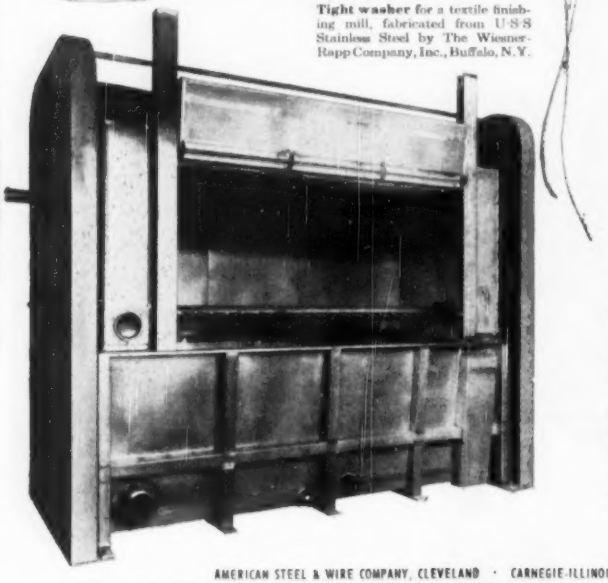
SKF
BALL AND ROLLER BEARINGS

8 REASONS WHY SKF IS PREFERRED BY ALL INDUSTRY

Integrity · Craftsmanship · Metallurgy · Tolerance Control · Surface Finish · Product Uniformity · Engineering Service · Field Service

Are you taking FULL advantage of Stainless Steel's ability to cut mill costs?

Starch squeeze roll used in the slashing process in a cotton textile grey mill. Fabricated from U·S·S 18-8S Stainless Steel by Sims Metal Works, West Point, Ga.



Tight washer for a textile finishing mill, fabricated from U·S·S Stainless Steel by The Wiesner-Rapp Company, Inc., Buffalo, N.Y.

IT'S almost impossible to enumerate all the mill operations where Stainless Steel's exceptional strength, high corrosion resistance and smooth, easily-cleaned surface can work together to keep costs in line and maintain your competitive position.

Here are 36 typical applications, listed on a department-by-department basis. There are many more.

. . . **spinning** — bobbin heads, gudgeons, guides, rods, separators, spindles.

. . . **knitting** — guides, knock-over bits, sinkers, stop motions, tension devices, transfer points.

. . . **slashing** — drums, hoods, rollers, size boxes, tensions, traverse wheels.

. . . **weaving** — control instruments, drop wires, feelers, guides, heddles, reeds.

. . . **dyeing** — dippers, hoods, hydroextractors, jigs, kettles, pipes.

. . . **finishing** — dry cans, fulling machines, kiers, reels, tenter clips, washers.

No one form, no one grade of Stainless is suitable for all these many and varied jobs. That's why it will pay you to take advantage of the broad experience of our Stainless engineers in selecting the right material for your job.

The exceptionally-wide variety of forms, sizes, analyses and finishes in which U·S·S Stainless Steel is available gives our engineers opportunity to select a material specifically designed for the conditions of the particular operation to which it is applied. It pays off for you in satisfactory, economical performance.

AMERICAN STEEL & WIRE COMPANY, CLEVELAND · CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH
COLUMBIA STEEL COMPANY, SAN FRANCISCO · NATIONAL TUBE COMPANY, PITTSBURGH · TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST · UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS

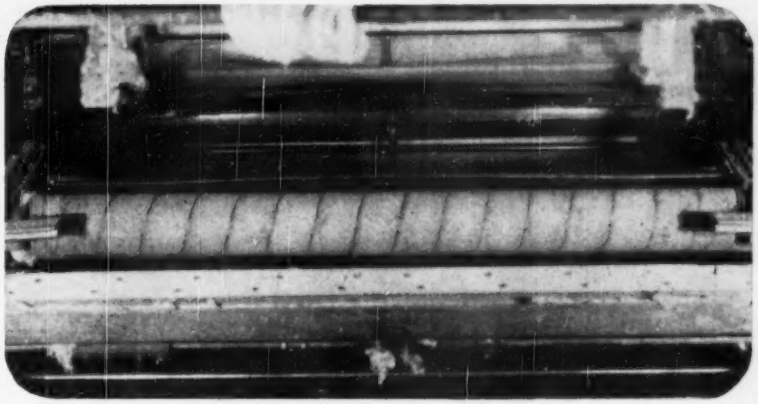
U·S·S STAINLESS STEEL

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

0-1550

UNITED STATES STEEL

COATED PRODUCTS COMMENTS



A non-slip textile roll covering

The gripping action of TEXALOX metalized cloth drawing roll coverings is powerfully firm, vibrationless and gentle. An even drawing tension is maintained across the entire width of the rollers. There is no danger of cutting or chafing the most delicate natural or synthetic material when TEXALOX cloth is used properly. Due to the complete elimination of slippage, delivery of a definite length of material can be assured. There are no star marks or broken fibers.

The thousands of hard (but not sharp) projections on each TEXALOX cloth cover are firmly anchored to a wear-resistant cloth backing and coated with metal. They are impervious to chemical action and do not become polished or slippery. As a result, the gripping power is maintained for years.

In using TEXALOX cloth covers, mills report better quality weaving, lower rejection losses and worthwhile savings. Find out for yourself.

Your CARBORUNDUM representative can give you all of the details. Coated Products Division, The Carborundum Company, Niagara Falls, New York.

COATED ABRASIVES BY

CARBORUNDUM

TRADE MARK

Making ALL abrasive products...
to give you the proper ONE

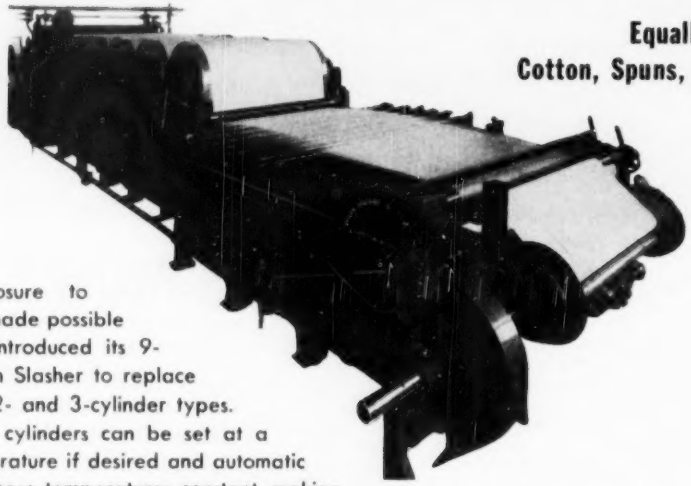
"Carborundum" and "Texalox" are registered trademarks which indicate manufacture by The Carborundum Company

THE LEADER
COCKER
AROUND THE WORLD

Eliminate Scorching of Warps

The Cocker 9-Cylinder High Speed Slasher

Equally Efficient on Cotton, Spuns, and Filaments



Gradual exposure to heat was first made possible when Cocker introduced its 9-Cylinder Cotton Slasher to replace old-fashioned 2- and 3-cylinder types. Each of the 9 cylinders can be set at a different temperature if desired and automatic controls keep these temperatures constant, making over-drying and scorching of the yarn practically impossible. Warps produced on this Cocker 9-Cylinder Slasher are far more uniform and the down-time in the weave room and in subsequent operations is far less.

Sensitive automatic controls and recording devices, heavier construction and perfectly balanced parts permit continuous high speeds and greater production. In every respect, the Cocker High-Speed 9-Cylinder Slasher is a superior machine.

For full data on this slasher or for advice on how the 9-Cylinder unit can be installed on your present slasher, write or wire our Gastonia offices.

Cocker Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

For Quality

PIN TENTER FINISHING YOU NEED

CONTROLLABLE OVERFEED

Any percentage *uniformly deposited* from -5% *to* $+35\%$.

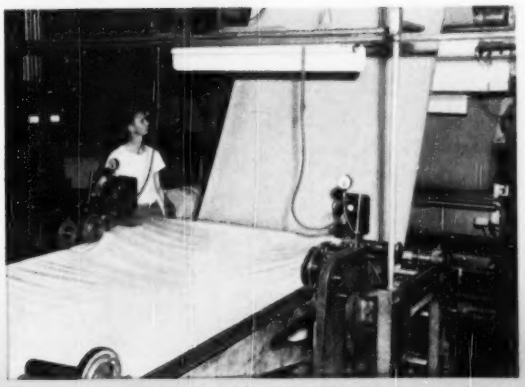
ACCURATE GUIDING

Improved Electro-hydraulic positive displacement guider provides extreme accuracy on *all fabrics.*

BALANCED DRYING

Special nozzle system gives *maximum drying speed* without distortion.

ONLY PROCTOR PIN TENTERS OFFER DEMONSTRATED RESULTS *COMBINING ALL 3 FEATURES*



If you are a cloth finisher, you can't afford to overlook the PROCTOR PIN TENTER—that is producing quality fabric results, at the rate of more than 75,000,000 yards annually.

PROCTOR overfed PIN TENTERS are available in either the vertical or horizontal type (in cooperation with Winsor & Jerauld) for *laces, tricots, specialty goods,* as well as standard fabrics.

Write, wire or phone for details today.

AVOID PRODUCTION DELAYS...

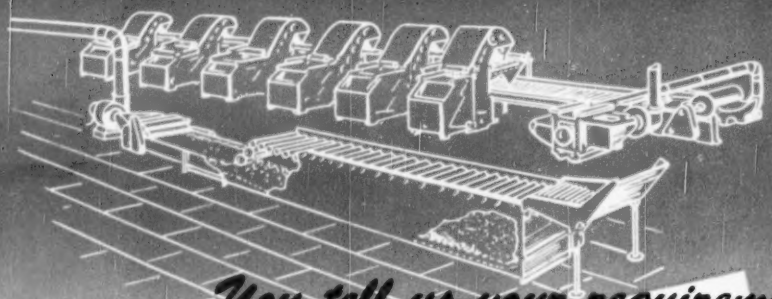
If you are already operating Proctor equipment—you can avoid costly time-out by maintaining an inventory of certain replacement parts. Let us recommend the parts you should stock!

PROCTOR & SCHWARTZ · INC·

PHILADELPHIA 20 · PA·

Designers and Manufacturers of

AUTOMATIC BLENDING and STOCK CONVEYING EQUIPMENT · CARDING and GARNETTING MACHINES · DRYERS FOR STOCK · YARN · PIECE GOODS · NYLON SETTING



You tell us your requirements...

We'll show you how to do your

BLENDING AUTOMATICALLY...

After several years of working with textile mills in designing systems for automatically blending fibers, it is apparent that there is really no limit to the possible application of the basic principles of automatic blending.

The number and type of units employed in the system and the physical arrangement of these units may vary widely to meet individual product and output requirements—but the end result is the same . . . automatic operation.

Automatic blending brings with it many important, cost-saving advantages. It eliminates the unevenness of manual blending, thus assuring an absolutely uniform mixture. It often makes possible greater use of lower-priced stocks and because of the rigid control that is possible, still assures a finished blend of better quality. It reduces direct labor costs in some instances by as much as 75%.

If you have the problem of blending two or more stocks—let Proctor engineers show you how to accomplish this blending automatically. They will also be able to show you, in concrete figures, how automatic blending pays for the equipment in a matter of months . . . and then begins to show up in increased profits.

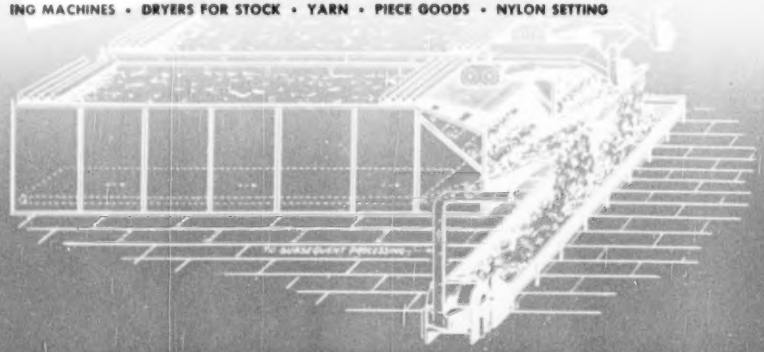
In the meantime, write for "Textile Mills Increasing Synthetic Fiber Blending"—an interesting reprint of an article by John H. Senior, Vice President of Proctor & Schwartz, Inc., and a national authority on the subject.

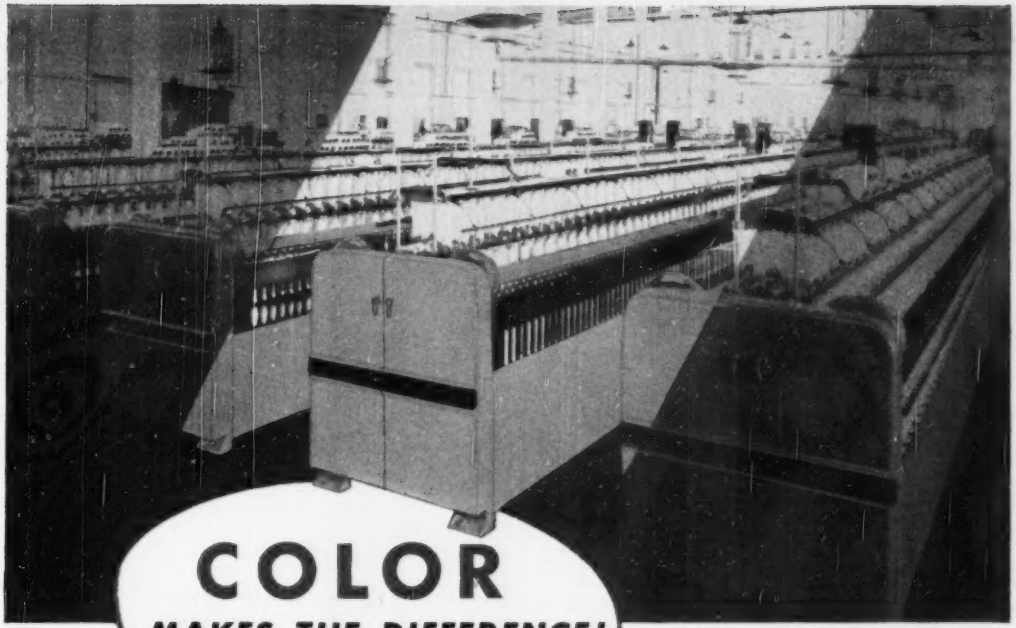
PROCTOR & SCHWARTZ · INC·

PHILADELPHIA 20 · PA·

Designers and Manufacturers of

AUTOMATIC BLENDING and STOCK CONVEYING EQUIPMENT • CARDING and GARNETTING MACHINES • DRYERS FOR STOCK • YARN • PIECE GOODS • NYLON SETTING





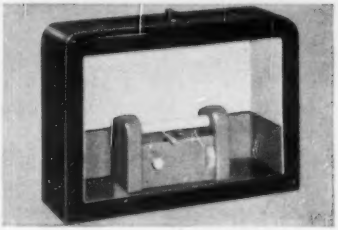
COLOR
MAKES THE DIFFERENCE!

SHERWIN-WILLIAMS COLOR HARMONIES
aid SEEING . . . boost PRODUCTION . . . improve MORALE

Color and lighting go hand in hand—in aiding workers to SEE better . . . WORK efficiently . . . PRODUCE more. Proper use of color in your mill or plant will smooth out high brightness contrasts . . . greatly improve QUALITY of illumination . . . eliminate distracting glare . . . reduce spoilage . . . improve quality of output.

Sherwin-Williams Color Harmony Finishes are available in a number of thoroughly tested and carefully studied color combinations which can be used with assurance that they will be correct from a functional standpoint, as well as pleasing and harmonious.

Your Sherwin-Williams representative can show you samples of Sherwin-Williams Color Harmony Finishes . . . present recommended combinations to meet your plant requirements . . . demonstrate, by means of miniature model settings, the advantages they offer. Call on his help—write, wire or phone. The Sherwin-Williams Co., Charlotte, N. C., Atlanta, Ga., and Cleveland, Ohio.



Choose your Color Harmonies from this plant model kit

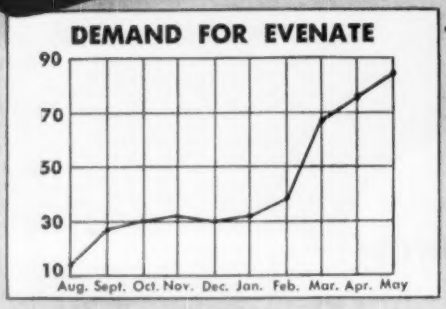
See, in miniature, what Sherwin-Williams prestudied Color Harmonies for Industrial Plants can do in improving working and seeing conditions. Your Sherwin-Williams representative can show you Color Harmony combinations suitable for your plant requirements with these model plant interior settings.

SHERWIN-WILLIAMS
INDUSTRIAL MAINTENANCE FINISHES

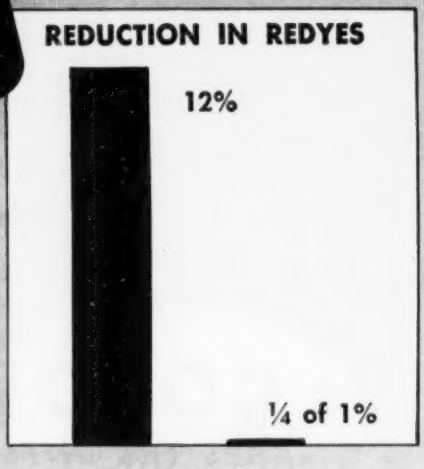
SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES • MILL VILLAGE PAINTS

Redyes are Reduced with *Evenate

*Evenate is a thin paste readily soluble in the dyebath. It is a non-ionic condensate combined with a glyceride.



Sales up 500% Aug. 1949 to May 1950



Based on actual dyehouse operation

Here is the amazing new dyeing assistant which is working miracles in the hosiery dyehouse. Check these results achieved on Nylon hosiery with Evenate in the dyebath:

(1) Redyes reduced from 12% to ¼ of 1% — the customers' figures, not ours.
(2) Better control of dyebath.
(3) Better unions between leg and welt.
(4) Better penetration.

Demand for Evenate is up 500% since August 1949. Evenate works equally well with acid colors and acetate dyes. Evenate reduces shade, maintaining union without stripping.

When redyeing becomes necessary, it can be done economically with Evenate. Evenate will reduce the number of shade variations in mixed dye lots.

Try Evenate in your production. Let us give you full details.

AMALGAMATED CHEMICAL CORP.
Philadelphia 34, Penna.
Southern Div.: 1819 Spring Garden St., Greensboro, N.C.

Amalgamated

Here's why your operators can give you

MORE PRODUCTION

with less effort, on the

W & G "Feldlock"

The W & G "Feldlock" is a high-speed, high-precision, lap seam felling machine, designed for maximum operator efficiency and minimum maintenance.

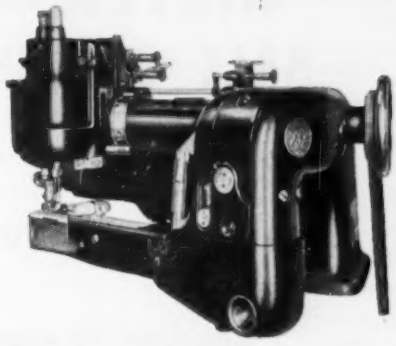
It's Easier to Operate. Feed-Off-The-Arm design permits a more comfortable position for the operator—gives more room for handling the work.

Requires No Oiling. Fully automatic, forced-feed lubrication relieves operator of all oiling duties—assures correct lubrication of all bearings, for smoother, quieter operation.

Permits Sustained High-Speed Production. The machine is precision built in every detail—designed to maintain the highest production standards under modern mass production methods.

Minimizes "Down Time." Design, workmanship, and highest quality components all add up to longer, trouble-free performance year after year. And easy accessibility of all parts makes it much easier to clean and adjust.

For complete information on the many advanced design features of the W & G "Feldlock" machine, send for your copy of Bulletin No. 896.



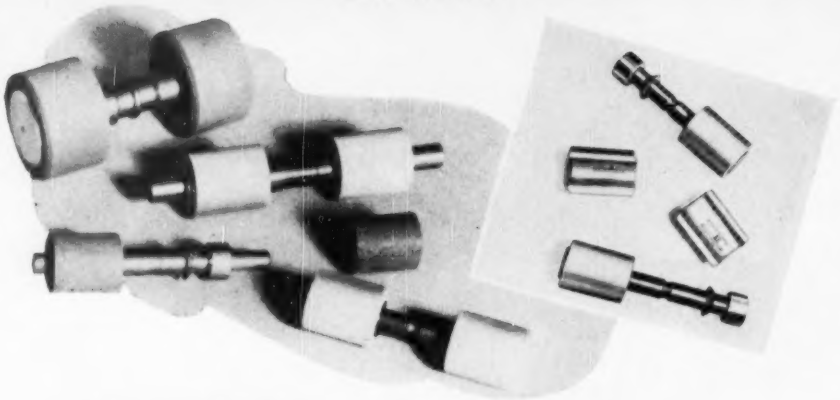
The W & G "Feldlock" with Automatic Lubrication is AVAILABLE NOW . . . ready for immediate delivery.

WILLCOX & GIBBS
Sewing Machine Co.

214 West 39th St., New York, N.Y.

Rieter Winterthur

Established 1795



RIETER *anti-friction*
BALL BEARING TOP ROLLERS

25,000 hours without lubrication

•

self-aligning

•

Cheaper to discard than to re-cover
Used throughout the world

Sole Representatives for U. S. A. and Canada

AMERICAN TEXTILE ENGINEERING, INC.

ARLINGTON, NEW JERSEY, U. S. A.

Joh. Jacob Rieter & Co., Limited, Winterthur (Switzerland)

Rayon Reports

Characteristics of New Avisco Crimped Staple Offer Important Advantages to Carpet Industry

A detailed analysis indicates that the heavy denier carpet staple recently introduced by Avisco will help relieve the carpet industry from complete dependence on imported raw materials and broaden opportunities for product development.

Avisco "15" is a crimped viscose rayon fiber of dull luster produced in 3-inch lengths. Each of the product's five characteristics—fiber diameter length, luster, crimp and the fact that it is a rayon fiber—has much to offer to the carpet industry.

Crimp means a fuller pile

The crimp in the fiber serves two desirable ends. The fiber occupies more space in the pile and causes each tuft to "burst" more completely. This provides a good cover and prevents the fibers from being packed tightly side by side. This has a beneficial effect in appearance which we believe may be associated with better soil resistance.

Long fibers reduce shedding

The fiber length of three inches is the longest that can be readily handled by cards and spinning machines. This uniform, long length will reduce shedding not only when the carpet is first put into service, but throughout its life.

15-denier resists matting

After several years of experiment, it was determined that the 15.0 denier fiber gives the maximum rigidity to a carpet pile, and at the same time provides an adequate fiber population in the pile. The large size also plays a part in imparting resistance to soiling because it resists matting and offers less surface area for dirt to cling to.

Provides the luster consumers want

The carefully controlled degree of luster presented in Avisco "15" produces colors with the agreeable, subdued luster demanded by most consumers today. It also has the effect of reducing the apparent difference between soiled and unsoiled sections of the carpet.

Cleanliness enhances color effects

The cleanliness and purity of Avisco "15" as delivered affords the opportunity for carpet manufacturers to present clear, brilliant colors. Resistance to fading, with the proper selection of dyestuffs, matches that of wool.

Tests indicate increased durability

Avisco research indicates that a pile of blended rayon and wool content shows increased wear life over a similar one made of all wool. Tests pointing to this conclusion include both laboratory and service tests on Axminster and Wilton constructions.

The development of an acceptable carpet fiber was a time-consuming project requiring much testing and evaluation. Avisco "15" is the result of more than ten years of such work. Development work is continuing toward even further improvements.

New Finishing Methods Developed for Avisco "15"

To decrease the soilability of carpet pile caused by oily material in the carpet fiber, Avisco has developed a new wax-base finish. Avisco "15" is delivered with the proper percentage already applied. In order to cut down fly in the card room and promote better action in the rub motions it is only necessary to spray on 8% of water during the picking. After stock dyeing, it is advisable to renew the finish. This can be done in the final rinse by using Avcosol 104.

RAYON 20 YEARS AGO

NEW YORK, August, 1930—One of the questions asked in the recent Edison scholarship quiz concerned the source of rayon, further evidence of the growing importance of man-made yarns.

NEW YORK, August, 1930—It is reported that gloves made from rayon are steadily increasing in demand.

NEW YORK, August, 1930—The use of rayon for garment linings has proved highly successful. It is reported that most linings are guaranteed to outwear the garment itself.

MAKE USE OF *Avisco* 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York I, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

16th SOUTHERN TEXTILE EXPOSITION

OCTOBER 2 to 7, 1950

TEXTILE HALL, GREENVILLE, SOUTH CAROLINA

Monday through Friday, 9 A. M. to 7 P. M.

Saturday, 9 A. M. to 1 P. M.

Two hundred and thirty-five manufacturers of, and dealers in, textile machinery, equipment, accessories, supplies, primary and fabricating materials, and parts will be represented. The following is a list of exhibitors:

Abbott Machine Co.
(Reception Booth)
Acme Steel Co.
Air Products Co.
Aldrich Machine Works
Allentown Bobbin Works, Inc.
American Air Filter Co., Inc.
Air Filter Division
American Air Filter Co., Inc.
Dust Control Division
American Crayon Co., The
American Lava Corp.
American Lumber & Treating Co.
American MonoRail Co.
American Paper Tube Co.
American Pulley Co., The
American Safety Table Co.
American Wool & Cotton Reporter
Armco Steel Corp.
Armstrong Cork Co.
Textile Division
Armstrong Machine Works
Ashworth Bros., Inc.
Atkinson, Haserick & Co.
Atlanta Brush Co.
Atlanta Paper Co.
Bachmann Uxbridge Worsted Corp.
Bahnson Co., The
Barber-Colman Co.
(Reception Booth)
Barco Manufacturing Co.
Bassick Co., The
Batson Manufacturing Co.
Bausch & Lomb Optical Co.
B. B. Sales Co.
Beaty, J. T., Machine Co.
Bijur Lubricating Corp.
Birch Bros., Inc.
Bowen-Hunter Bobbin Co.
Brush Development Co.
Bullard Clark Co., The
Burroughs Adding Machine Co.
Bussmann Manufacturing Co.
Carolina Bearings
Carolina Detergents, Inc.
Carolina Supply Co.
Carter, A. B., Inc.
Charlotte Mfg. Co.
Clark Equipment Co.
Clark Tractractor Div.
Clinton Industries, Inc.
Colson Corp., The
Container Corp. of America
Continental-Diamond Fibre Co.
Corn Products Sales Co.
Courtney, Dana S., Co.
Crabb, William, & Co.
Curtis & Marble Machine Co.
(Reception Booth)
Cutler-Hammer, Inc.
Daily News Record
Daniels, C. R., Inc.
Darnell Corp.
Dayton Rubber Co., The
Delta Air Lines, Inc.
Deublin Co.
Dixon Lubricating Saddle Co.
Draper Corp. (Repair Parts)
DuPont, E. I., de Nemours & Co., Inc.
Eastern Air Lines, Inc.
Easton & Burnham Machine Co.
Eddy International Corp.
Edgcomb Steel Co.
Eriez Manufacturing Co.
Esso Standard Oil Co.
Excel Textile Supply Co.
Fairbanks Co., The
Faultless Caster Corp.
Fibre Specialty Mfg. Co. Div.
Finnell System, Inc.
Fiske Bros. Refining Co.
Lubriplate Division
Fuller Brush Co., Industrial Div.
Garratt-Callahan Co. of Ill.
Gaston County Dyeing Mch. Co.
Gates Rubber Co., The
Geophilift Corp.
General Electric Co.
Gilman Paint & Varnish Co.
Gilmer, L. H., Co.
Girdler Corp., The
Glenn & Larson
Gossett, Ralph, & Co.
Graton & Knight Co.
Greenville Textile Supply Co.
Griffin, Ira L., & Son
Gulf Oil Corp.
Hart Products Corp.
Herr Manufacturing Co.
Holdsworth Gill Screw Co., Inc.
Hibbert, Joseph, & Co., Ltd.
Hollister-Moreland Co.
Hope Webbing Co.
Howard Bros. Mfg. Co.
Hubinger Co.
Hunt Machine Works, Inc.
Huntington & Guerry Electric Co.
Hyster Co.
Ideal Machine Shops, Inc.
Industrial Instruments, Inc.
Industrial Tape Corp.
International Business Machines Corp.
Jenkins Bros.
Johns-Manville Corp.
Johnson Corp., The
Johnson Service Co.
Kearny Manufacturing Co.
Keever Starch Co.
Keystone Lubricating Co.
Kidde, Walter, & Co., Inc.
Kirkman & Dixon Mch. Shop & Fdry.
Kold-Hold Mfg. Co.
Platecoil Division
Lambeth Rope Corp.
League, G. F., Mfg. Co.
Lestershire Spool & Mfg. Co.
Lincoln Engineering Co.
Link-Belt Co.
Livermore, H. F., Corp.
Louis-Allis Co.
Macbeth Corp.
Manton-Gaulin Mfg. Co., Inc.
Marchant Calculating Mch. Co.
Markem Machine Co.
Marquette Metals Products Co.
Marshall & Williams Southern Corp.
Masury Young Co.
McBride, Edward J., Co.
McLeod Companies, Inc.
Meadows Manufacturing Co.
Merrow Machine Co.
Metal-Glass Products Co.
Miller Co., The
Miller Textile Comb Co., Inc.
Minneapolis-Honeywell Regulator Co., Brown Instruments Div.
Minnesota Mining & Mfg. Co.
Mobilift Corp.
Moffatt Bearings Co.
Monroe Calculating Mch. Co.
Morrison Machine Co.
Morton Salt Co.
Mount Hope Machinery Co.
National Cash Register Co.
National Electric Products Corp.
National Ring Traveler Co.
National Starch Products, Inc.
New England Machine Works
New York & New Jersey Lubricant Co.
Norcross Corp.
Nutting Truck & Caster Co.
Oakite Products, Inc.
Odell Mill Supply Co.
Odom Machine Mfg. Corp.
Paddock, J. C., Co.
Parks & Woolson Machine Co.
Penick & Ford, Ltd., Inc.
Perfecting Service Co.
Pittsburgh Corning Corp.
Platt Bros. (Sales) Ltd.
Plibrico Jointless Firebrick Co.
Plutte, Koecke & Co.
Pontonier Chemicals, Inc.
Precision Gear & Machine Co.
Pure Oil Co., The
Puritan Chemical Co.
Ragan Ring Co.
Rayon and Synthetic Textiles
Reeves Pulley Co.
Reiner, Robert, Inc.
Reliance Electric & Eng. Co.
Rhoads, J. E. & Sons
Ridge Tool Co., The
Robbins & Myers, Inc.
Rockwood Mfg. Co.
Roy, B. S., & Son Co.
Sarco Co.
Selig Co., The
Seydel-Woolley & Co.
Sinclair Refining Co.
Sirrine, J. E., Co.
SKF Industries, Inc.
Smith, Drum & Co.
Societe Alsacienne de Constructions Mechaniques
Sonoco Products Co.
Southeastern Fire Extinguisher Sales, Inc.
Southeastern Sound & Electronics Corp.
Southern States Equipment Corp.
Staley, A. E., Mfg. Co.
Standard Mill Supply, Inc.
Standard Pressed Steel Co.
Stanley Works, The
Steel Heddle Mfg. Co.
Stein, Hall & Co., Inc.
Sterling Eng. & Mfg. Co.
Stewart Warner Corp.
Alemite Division
Sullivan Hardware Co.
Sylvania Electric Products, Inc.
Synthane Corp.
Talcott, W. O. & M. W., Inc.
Taylor Instrument Cos.
Tennant, G. H., Co.
Texas Co., The
Texize Chemicals, Inc.
Textile Age
Textile Bulletin
Textile Industries
Textile Shop
Textile World
Tide Water Associated Oil Co.
Toledo Scale Co.
Treplow Products, Inc.
Truscon Laboratories, The
Tweedales & Smalley (1920) Ltd.
U. S. Electrical Motors, Inc.
U. S. Gutta Percha Paint Co.
U. S. Ring Traveler Co.
United States Testing Co., Inc.
Up-Right Scaffolds
Veeder-Root, Inc.
Venango Engineering Co.
Walker Manufacturing Co.
Walworth Co.
Watson & Desmond
Watson-Williams Mfg. Co.
Waukesha Foundry Co.
West Disinfecting Co.
Westinghouse Electric Corp.
Westinghouse Lamp Div.
Weston Electrical Instrument Corp.
Whitin Machine Works
(Repair Service Exhibit)
Whiting Products
Whitinsville Spinning Ring Co.
Wilbur & Williams Co., The
Worthington Pump & Machine Co.
Wrenn Bros.

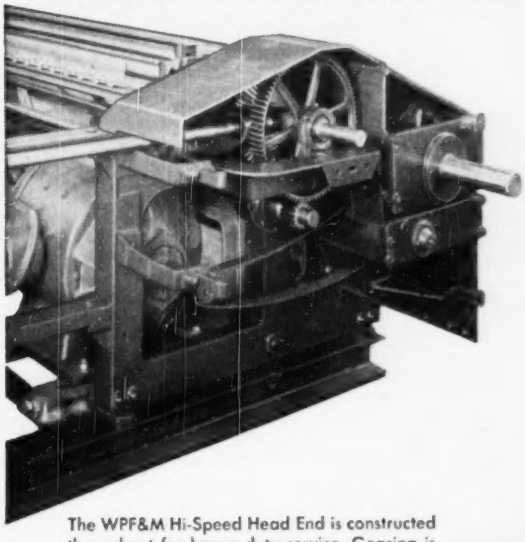
Room reservations may be made now. Address Rooms Committee:

TEXTILE HALL CORPORATION

GREENVILLE, S. C.

A HI-SPEED HEAD END WITH A MIND OF ITS OWN

MULTI-MOTOR DRIVE AND ACCURATE CONTROL HOLD PRE-SET YARN TENSION CONSTANT AT OPERATING SPEEDS UP TO 100 YARDS PER MINUTE



The WPF&M Hi-Speed Head End is constructed throughout for heavy duty service. Gearing is simplified and eliminates frictional losses of old style clutches and speed cone drives. Drive and motors are completely covered, fully protected from lint and dirt.

Here's a Head End, equipped with Multi-Motor Drive, that accurately controls yarn stretch and tension at running speeds ranging from 20 to 100 yards per minute; a creep speed of four to six yards per minute.

In place of old style friction, an individual motor winds the beam. Individually driven slasher rolls are synchronized by the Drive and controlled by a rheostat.

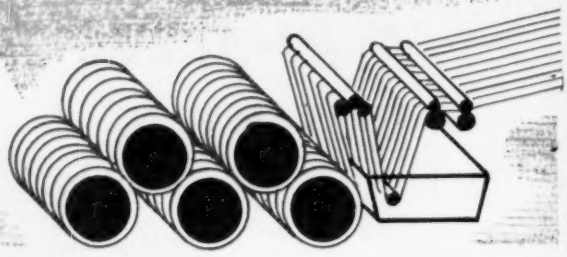
Indicating meters can be quickly and accurately pre-set to any desired yarn tension. Once set, tension remains constant—all beams are wound uniformly tight—from start to finish. After proper tension has been determined for a particular grade yarn, it can be duplicated at any time by merely setting the rheostat.

Elimination of costly guesswork adjustments means a better quality finished product . . . increased loom efficiency.

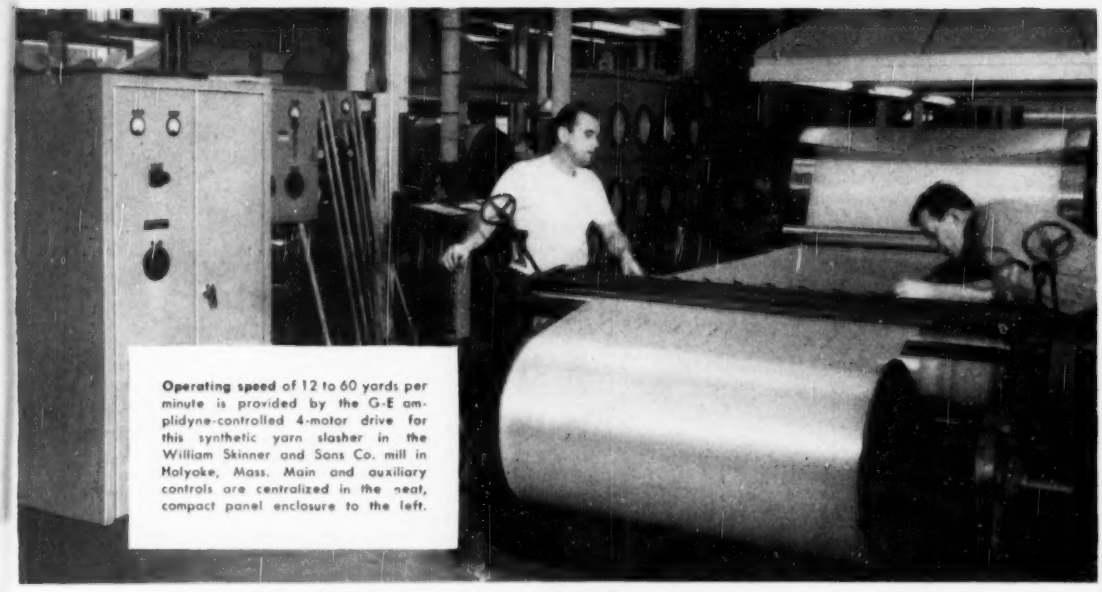
We will be glad to send you detailed information of this Head End's many other advantages . . . or make a survey in your slasher room if you desire.

WEST POINT FOUNDRY & MACHINE CO.
WEST POINT, GEORGIA

FROM CREEL BEAMS... TO WARP BEAM



JUST THE RIGHT TENSION



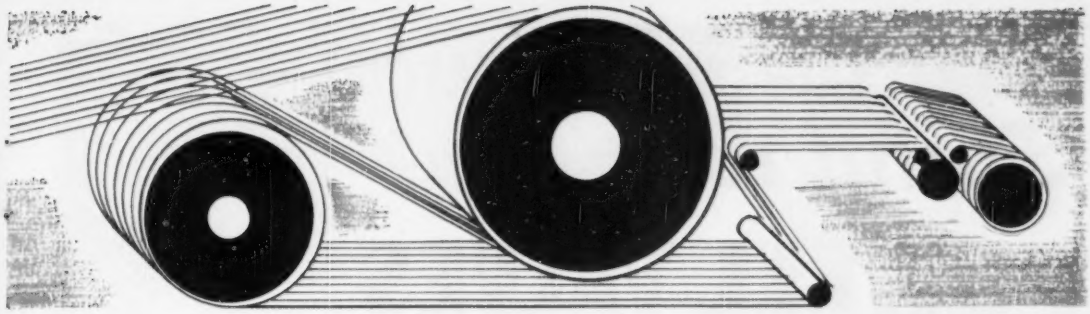
Operating speed of 12 to 60 yards per minute is provided by the G-E amplidyne-controlled 4-motor drive for this synthetic yarn slasher in the William Skinner and Sons Co. mill in Holyoke, Mass. Main and auxiliary controls are centralized in the neat, compact panel enclosure to the left.

Advantages? Just look at these!

- You can adjust tension and speed to suit any yarn.
- Once selected, desired tension is maintained automatically throughout beam build-up.
- A simple rheostat adjustment keeps yarn tension low between size box and dryer.
- You can easily pre-set running and creeping speeds.
- Tension variations and yarn damage are prevented by the drive's exceptionally smooth acceleration and smooth, fast deceleration.
- You can easily tie-in automatic moisture controllers to the drive, if desired.
- All main control equipment is centralized in one control panel, with remote operating controls located within easy reach at the slasher.
- You eliminate the need to maintain line shafting, mechanical speed changers, and slip clutches.

GENERAL ELECTRIC

6548



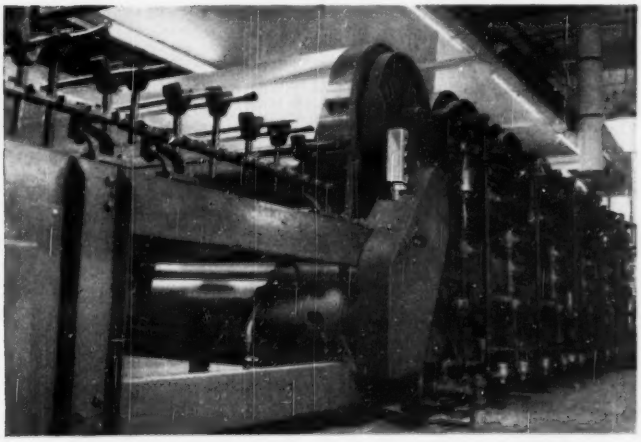
-held automatically!

With a G-E MULTI-MOTOR SLASHER DRIVE you get uniform, high-yardage warps, fewer ends down at the loom, higher weave-room efficiency!

Here's the modern way to the better-quality warps you need for today's higher weaving speeds—a General Electric multi-motor slasher drive with amplidyne control. It provides *automatically* the tension you want for most efficient slasher operation, minimizes dependence on "feel" and "guesswork." That means you all but eliminate broken warp yarns, soft spots in the beam, and irregularities in yarn tension. Result: stepped-up efficiency in your weave shed!

With this G-E drive, a uniformly low tension maintains elasticity in the yarn while it passes through size tank and drying cylinders. At the beam, tension is automatically increased to the value you select to produce maximum yardage warps.

Planning to modernize? See your G-E textile-mill specialist. If it's a new slasher installation that's on your mind, be sure to discuss this G-E drive with your machinery manufacturer. For more data on G-E slasher drives, write for Bulletin GEA-5259. *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*



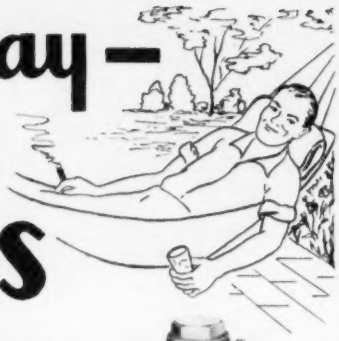
As seen from the windup end, one of four G-E 1½ hp gear motors is here shown driving the drying cylinders. The conveniently-placed remote-control push-button station above it permits operator to start and stop the drive from the drying section.

See "Textiles Unlimited"

It's General Electric's new full-color sound movie on how textile mills are modernizing. Chock full of ideas you can use on improving product quality and cutting costs, it covers such subjects as lighting, air conditioning, power distribution, machine drives, quality control, new processing methods, and many others. Ask your G-E representative to arrange a showing of this More Power to America production for your organization.

GE DRIVE SYSTEMS FOR TEXTILE MILLS

Do it the EASY way — *Standardize on* POWELL VALVES



When you get your valves from various sources, buying for replacement—and stocking spare valves and parts—becomes unnecessarily complicated.

But when you buy **ALL** your valves—Bronze, Iron, or Steel, and, if you need them, Corrosion-Resisting Valves—from **ONE** source, you have the answer to your flow control problems. Powell makes them all* and makes them better. Also Powell makes the *only* **COMPLETE** Line of Valves for Corrosion-Resistance available to Industry today.

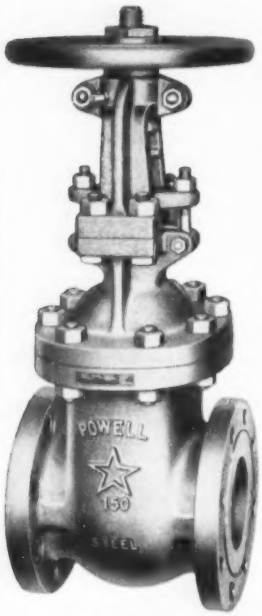
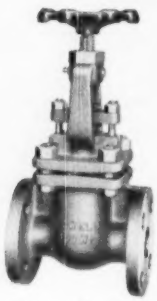


Fig. 1503—Class 150-pound Cast Steel Gate Valve with flanged ends, outside screw rising stem, bolted flanged yoke, tapered solid wedge.



New 150-pound Gate Valve with flanged ends, outside screw stem and yoke, bolted flanged bonnet. Face to face dimensions conform to MSS SP42. **Fig. 2471** — Available in 18-8S, 18-8S Mo, Durimet "20". **Fig. 2473** —Available in Nickel, Monel Metal, Ampco Alloy, Everdur, Hastelloy Alloys A-B-C. These valves are also available with screwed ends.

Fig. 375 — 200-pound Bronze Gate Valve. Screwed ends, union bonnet, inside screw rising stem and renewable "Powellium" wear-resisting nickel-bronze disc.

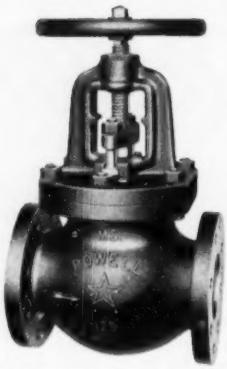


Fig. 241—Large 125-pound Iron Body Bronze Mounted Globe Valve. Sizes 2" to 16", incl. Has outside screw rising stem, bolted flanged yoke and regrindable, renewable bronze seat and disc.

Fig. 1847—200-pound Stainless Steel Swing Check Valve with screwed-in cap and regrindable, renewable disc.

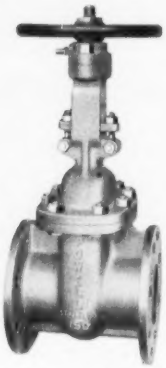
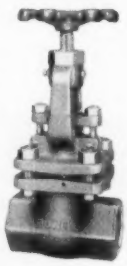


Fig. 2453-G—Standard 150-pound Stainless Steel Gate Valve with flanged ends, outside screw rising stem, bolted flanged yoke-bonnet and tapered solid wedge.



New 150-pound Globe Valve with screwed ends, outside screw rising stem and yoke, and bolted flanged bonnet. **Fig. 2474** — Available in 18-8S, 18-8S Mo, Durimet "20". **Fig. 2476** — Available in Nickel, Monel Metal, Ampco Alloy, Everdur, Hastelloy Alloys A-B-C. Flanged end valves are furnished with face to face dimensions conforming to latest MSS Standards.

***The Complete Powell Line includes Globe, Angle, "Y", Gate, Check, Non-return, Relief and Flush Bottom Tank Valves in Bronze, Iron, Steel and a wide range of Corrosion-resistant metals and alloys.**

Ask your nearest Distributor—or write direct

The Wm. Powell Co., Cincinnati 22, Ohio

DISTRIBUTORS AND STOCKS IN ALL PRINCIPAL CITIES

POWELL VALVES

Outstanding fastness to light

PONTAMINE* Fast Violet 4RL

For cotton or viscose rayon . . . in pale or heavy shades. PONTAMINE Fast Violet 4RL is especially well-suited to the production of deep reddish-violet and mauve shades. It can be used as a reddening element for beige, gray, and taupe shades.

Besides outstanding light-fastness, this dye has good resistance to laundering, dry cleaning, perspiration and dry crocking. It is readily soluble, has good absorption, penetrates thoroughly and yields level dyeing.

PONTAMINE Fast Violet 4RL is recommended for a variety of uses such as drapery and upholstery fabrics, sportswear and dress goods.

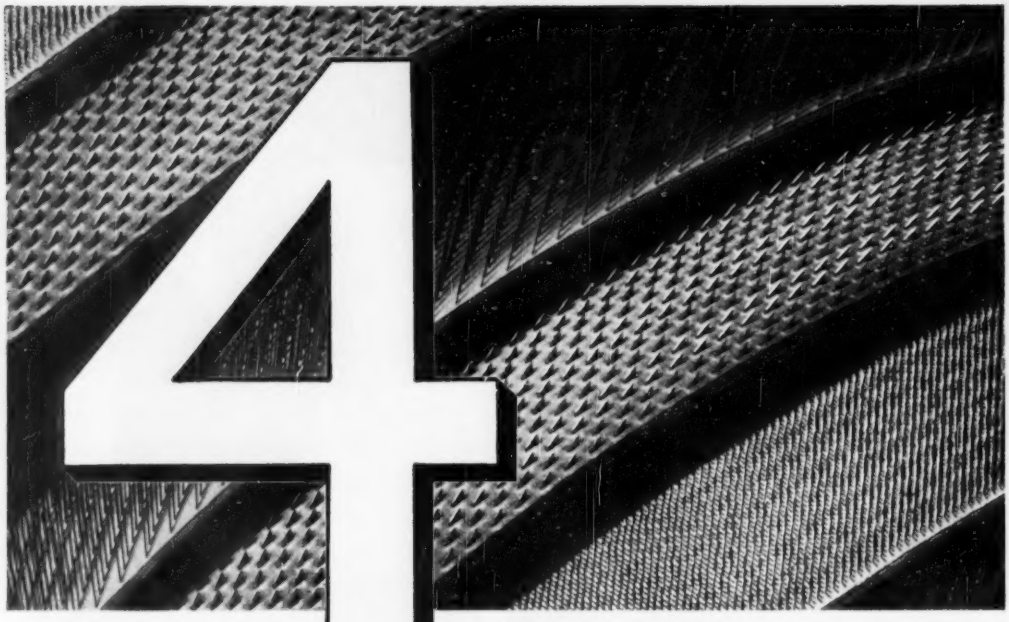
E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

*REG. U. S. PAT. OFF

Du Pont Dyestuffs

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



Your Guarantee of An Uninterrupted Supply

4 CARD CLOTHING FACTORIES

Fall River Factory

Worcester Factory

Philadelphia Factory

Greenville Factory

No factory is proof against flood, fire or man-made interruptions, but the chances that 4 factories in widely separated areas will all be thus affected at the same time are remote. That's why Ashworth can practically guarantee an uninterrupted supply of card clothing and allied products.

Specify Ashworth and get not only continuity of deliveries, but also uniformly high quality resulting from 90 years of experience in cards and card clothing by one family.

Ashworth can help you to make your cards more efficient. Ask us about Ashworth Surveys.

Visit Us at Southern Textile Exposition — Sections 122 and 123

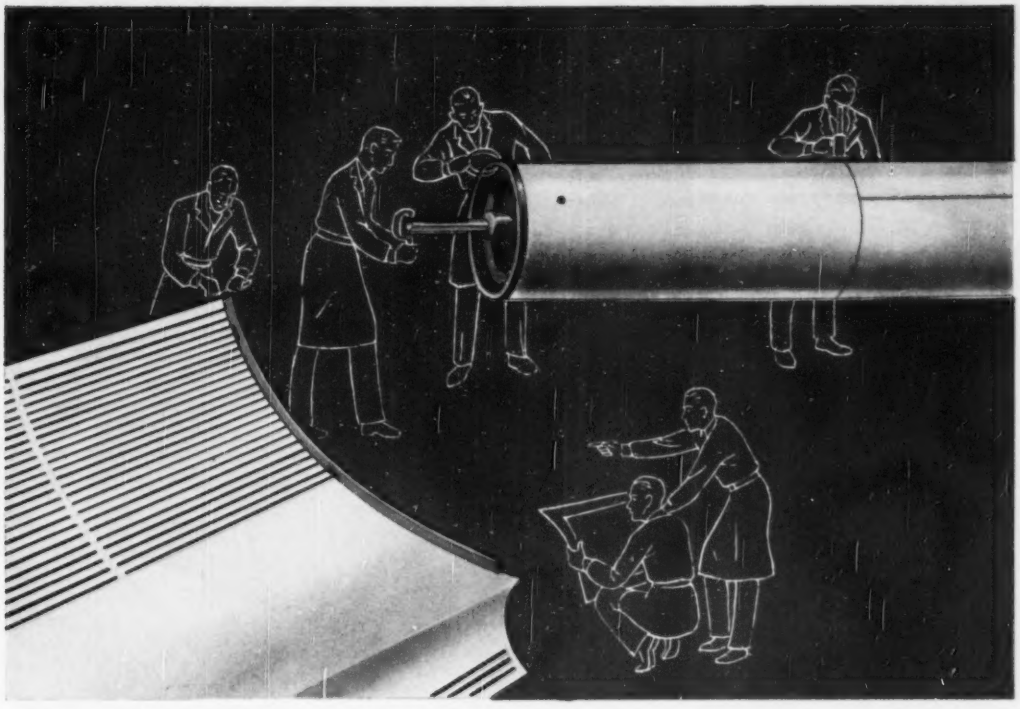
ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Div.)

Fall River*†‡ Worcester*‡ Philadelphia*†‡ Atlanta†‡ Greenville*†‡
Charlotte†‡ Dallas†‡ (Textile Supply Co.)

*Factory †Repair Shop ‡Distributing Point

4 FACTORIES • • • 6 REPAIR SHOPS • • • 7 DISTRIBUTING POINTS



WHY JOB ENGINEERED PRODUCTS

Give You Greater Economy

When you install Jenkins Dynamically Balanced Cylinders and new, improved Card Screens . . . you install products scientifically designed to give smoother performance . . . precision built to give longer wear.

You get maximum uniformity in all parts of every product . . . machined by equipment which is developed and used exclusively by Jenkins. You get the advantage of Jenkins' own complete machine shop, equipped to meet *individual* specifications . . . products made *for* the job, rather than merely adapted to it.

Jenkins engineered workmanship means smoother, steadier cylinder performance . . . perfect card screen settings. It means maximum production, uniform yarn quality, and lower maintenance cost in your mill.

JENKIN'S *Dynamically Balanced* SPINNING CYLINDERS

© JENKINS METAL SHOP

For long-range economy, rely on Jenkins' 37 years of experience and guaranteed-quality workmanship.

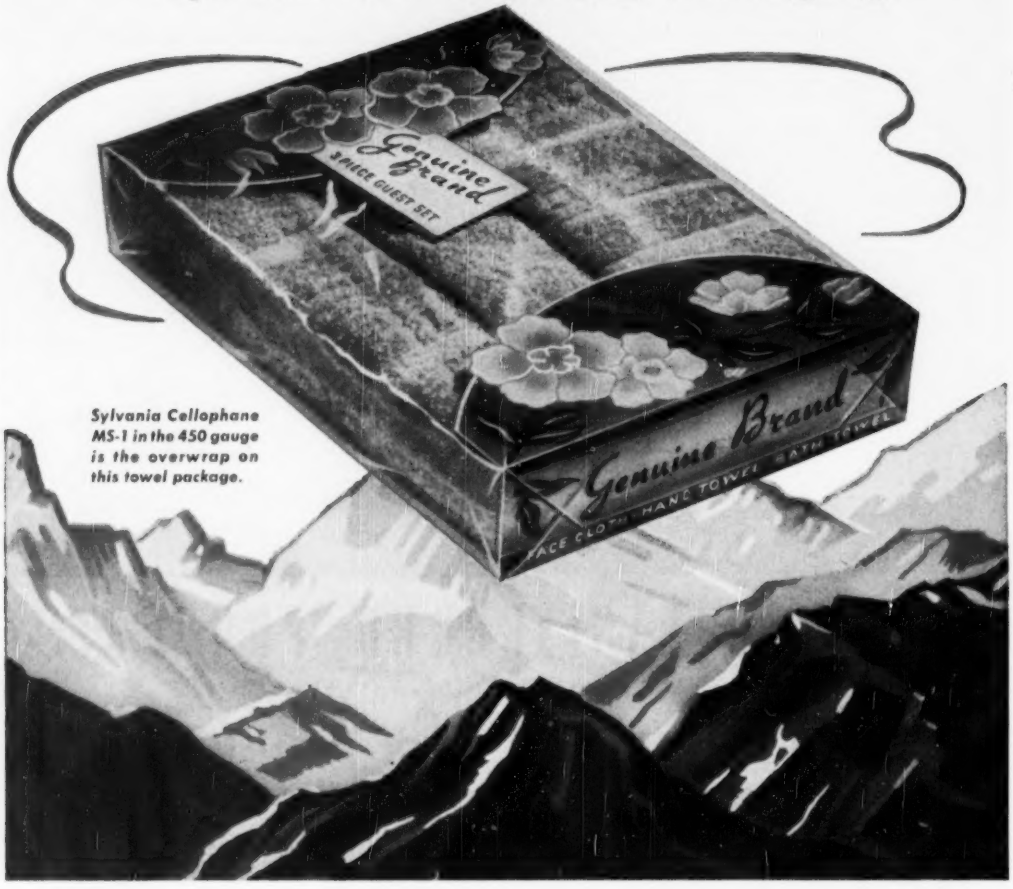
JENKINS METAL SHOPS

INCORPORATED

GASTONIA, NORTH CAROLINA

SYLVANIA CELLOPHANE

—tops the Field in Textile Packaging!



Sylvania Cellophane MS-1 in the 450 gauge is the overwrap on this towel package.

these special properties tailored to your product tell why

1 Sales Appeal **3** Durability
2 Transparency **4** Dust Protection
5 Low Cost

Mr. Cellophane is always available to help you solve your packaging problems. Talk over your requirements with your Sylvania representative or write to Market Development, Dept. TI-8, mentioning the specific application in which you are interested.

SYLVANIA CELLOPHANE ®

SYLVANIA CELLOPHANE

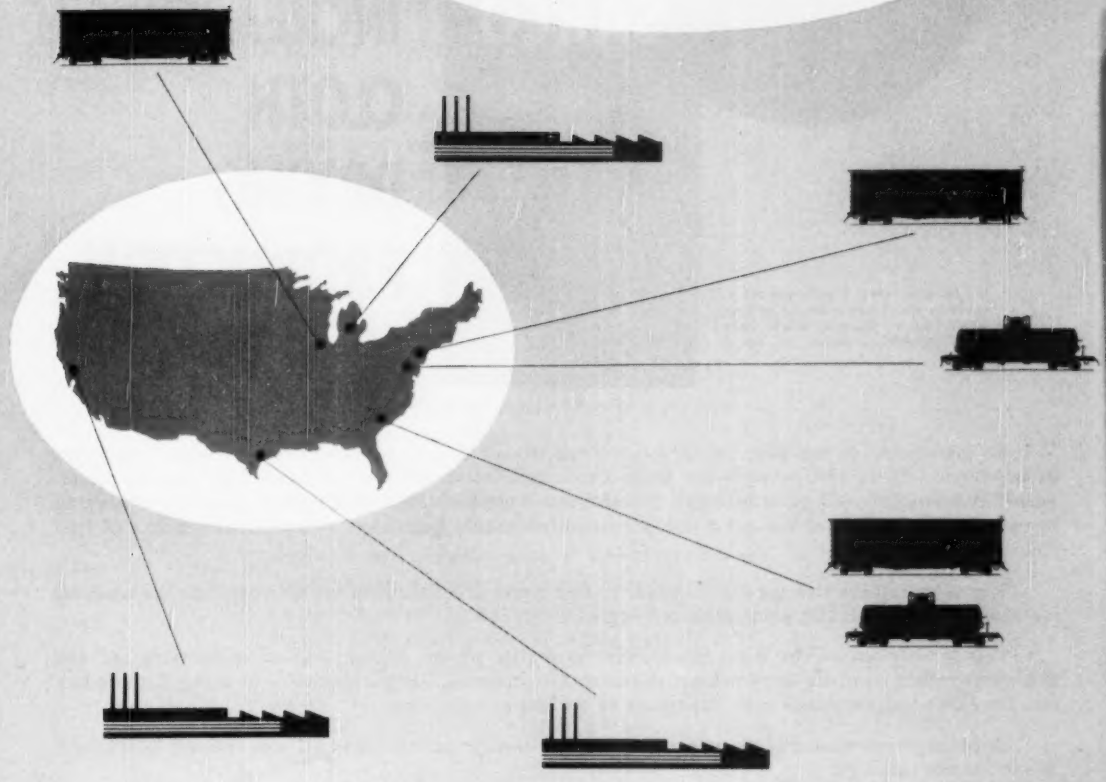
SYLVANIA DIVISION AMERICAN VISCOSE CORPORATION
Manufacturers of cellophane and other cellulose products since 1929
General Sales Office: 1617 Pennsylvania Blvd., Philadelphia 3, Pa.
Plant: Fredericksburg, Va.

Dow Caustic Soda

serves industry

. . . with unequalled distributing facilities

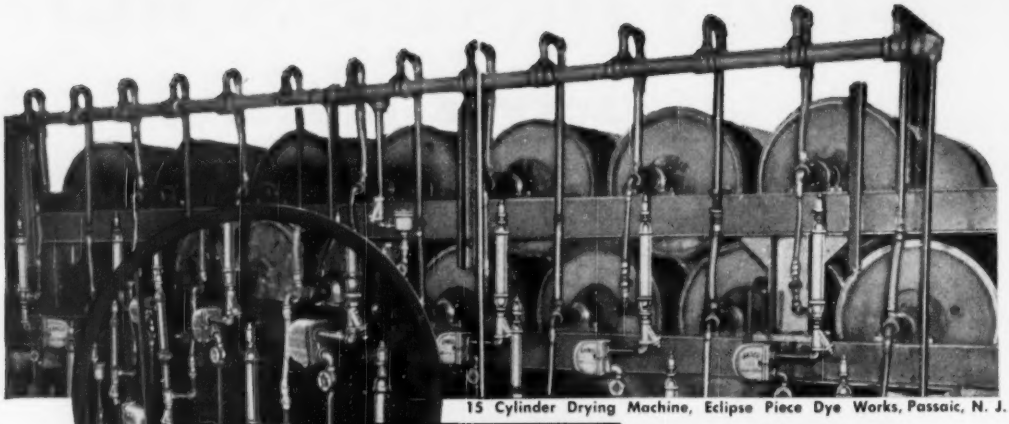
1. Three producing plants—in Michigan, Texas and California.
2. Caustic Soda Solution bulk tank terminal distributing facilities—Carteret, N. J. and Charleston, S. C.
3. Caustic Soda Solid, Flake and Ground Flake terminal distributing facilities—Chicago, Ill., Charleston, S. C., and Port Newark, N. J.



THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

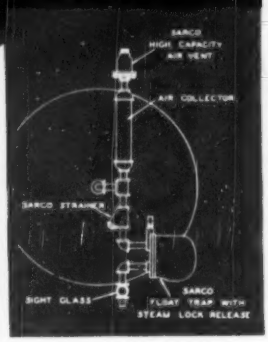
New York • Boston • Philadelphia • Washington • Atlanta • Cleveland • Detroit • Chicago
St. Louis • Houston • San Francisco • Los Angeles • Seattle
Dow Chemical of Canada, Limited, Toronto, Canada

DOW
CHEMICALS
INDISPENSABLE TO INDUSTRY AND AGRICULTURE



15 Cylinder Drying Machine, Eclipse Piece Dye Works, Passaic, N. J.

SARCO INCREASED CLOTH DRYING PRODUCTION 10 *to* 15%



The Sarco System is a packaged unit—ready to install and made up of time tested, Sarco elements which have given satisfactory service for years.

An investment of less than 1% of the original cost of this 15 cylinder drying machine increased its production 10 to 15% — with the Sarco Drainage System. Because all condensate and air are removed continuously, all parts of every cylinder are always hot. No air binding — no water logging — no steam locking; and you get a dollar's worth of usable heat from every dollar's worth of fuel you buy.

Warm-up time is also greatly reduced. In one plant, 2½ hours are saved every time the machine is started up — in this case a dozen times a week.

This is only one of the ways Sarco Saves in textile plants. Elimination of condensate and air, and temperature controls are working wonders. For instance, Sarco experience in using hot condensate for other purposes may save thousands of dollars in your plant.

Sarco products also include self-operated and electric controls for all wet process operations. Write for the catalogs.

302

SARCO SAVES STEAM

SARCO COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N. Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

IMPROVES PRODUCT QUALITY AND OUTPUT

FROM CIBA RESEARCH...

Timely Data on Dyeing

NYLON

properties of the

YOUR INQUIRY IS INVITED on any and all problems arising from the dyeing of Nylon.

Here at Ciba, we realize that because of its wonderful physical properties the use of Nylon alone or as a blend component is constantly increasing . . . and the dyer's problems in direct proportion.
The dyeing of blends, especially those of Nylon and Wool, may be extremely baffling, and all of these factors play a part in the best color selection...

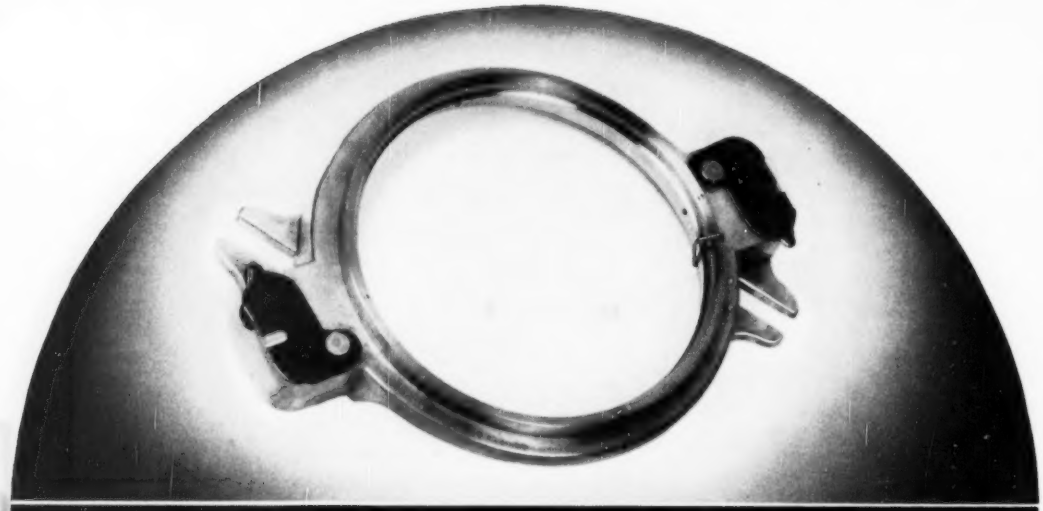
1. The end use requirements
2. The percentage composition of each fiber
3. The pigmentation in the Nylon
4. The depth of shade to be dyed.

Obviously there can be no such thing as a standard formula applicable to all constructions. Each shade on each blend becomes an individual problem. From exhaustive tests and a compilation of data, we believe we can give you helpful practical advice for your particular fiber or fabric and we invite you to tell us your problem.

CIBA COMPANY, INC.

627 GREENWICH STREET, NEW YORK 14, N. Y.

Boston Chicago Charlotte
Providence San Francisco Philadelphia



Only HERR *makes the* "CONICAL RING"

and here is why it is in satisfactory use by the hundreds of thousands thruout the world

1. *Conical* shape produces an outward and downward action with the traveler riding on the top and side face of the ring.

2. Helps reduce yarn breakage and to increase production of higher quality yarn with reduced waste, because the bottom foot of the traveler is kept free to act as a compensating factor to the yarn.

3. Special oil feature provides for absolute control of the flow of oil to the traveler; results in cleaner fabric, minimum oil consumption, longer traveler life, NO rewicking.

4. Constructed of durable drop-forged steel.

5. Mounted in special die-cast holders to accommodate any spinning and twisting rail condition.

TIMELY SUGGESTION

May we have one of our representatives call and discuss your ring problems with you.

Used for Quality Spinning and Twisting of Wool, Worsted, Synthetic and Blended Yarns of all types; also Cotton **Twisting.**

HERR MANUFACTURING CO., Inc.

318 FRANKLIN STREET • BUFFALO, NEW YORK

A REVOLUTIONARY ADVANCE IN COARSE FIBER WINDING

The New Schweiter Automatic Hollow Cop Winder

INCREASES PRODUCTION... REDUCES OPERATING COSTS!

The Schweiter Automatic Hollow Cop Winder incorporates many features making it far superior to the obsolete non-automatic type for winding jute, hemp, paper, linen, carded wool or any coarse textile fibers. It eliminates manual starting and doffing operations which represent at least 50% of the operator's time. High speeds, adjustable up to 3300 r.p.m., increase production and yet allow for varying speeds to handle different yarns. In many instances this Schweiter Winder has paid for its cost in less than one year.

Each spindle is a separate unit with gearing sealed in an oil tight box. Progressive three-disc-tension control is adjustable by one knob. Feeler-cone for building the cop runs on ball bearings. Cops can be wound clockwise or counter clockwise up to 13¾" long by 1⅞" diameter.

NOW MADE AVAILABLE TO MILLS IN UNITED STATES AND CANADA SOLELY BY:

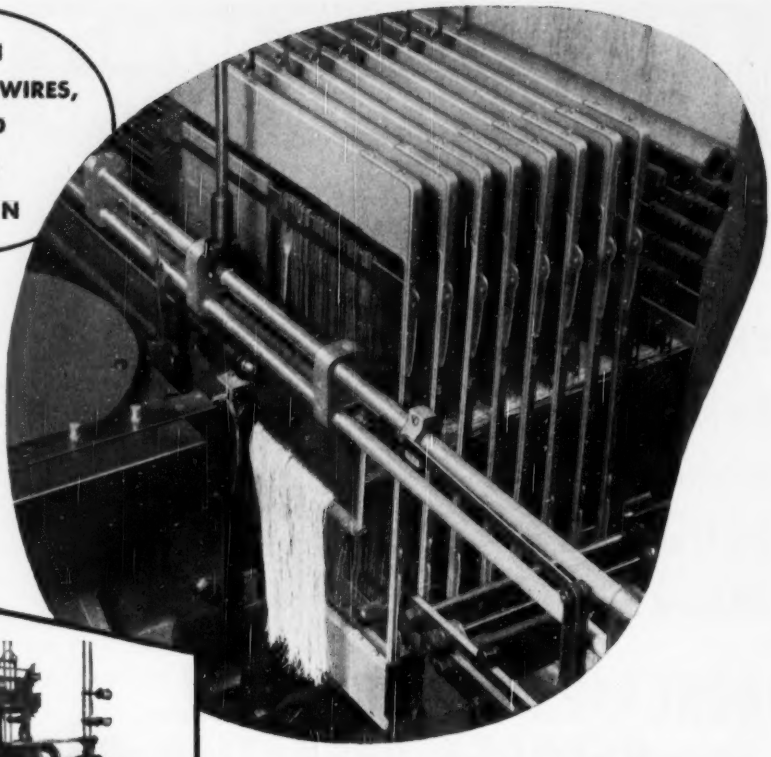
Whitin MACHINE WORKS

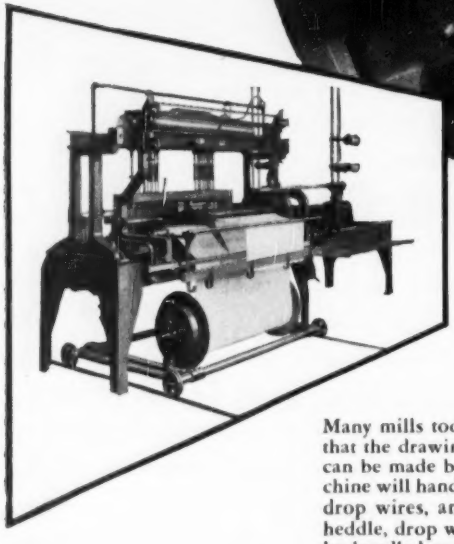
WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

DRAWS-IN
HEDDLES, DROP WIRES,
AND REED
IN **ONE**
OPERATION

★ VERSATILE...
★ ACCURATE...
★ EFFICIENT...





BARBER-COLMAN DRAWING-IN MACHINE

Many mills today are running such a variety of weaves, patterns, and stripes that the drawing-in operation becomes a major cost item. *Substantial savings* can be made by the use of a Barber-Colman Drawing-In Machine. This machine will handle any plain, fancy, or dobby weave. It draws-in all the heddles, drop wires, and reed in *one* operation — automatically selecting the proper heddle, drop wire, and reed dent for each thread. Any form of skip draw can be handled as easily as straight sequence, and the draw can be made from either a flat sheet or leased warp. The machine is available in a variety of capacities, drawing as many harness and banks of drop wires as required. Variations in size will take care of all standard loom widths. Modern mills of any size can take advantage of the versatility, accuracy, and efficiency of this outstanding machine to effect important savings in what has been a slow and costly hand operation. Consult your Barber-Colman representative for a discussion of possibilities in your own mill.

Reduce Costs!

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY

how NOPCO* FUA

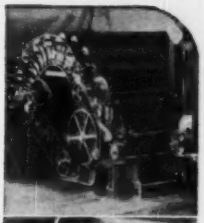
the modern self-fulling self-scouring wool oil adds up to better wool processing at less cost

Carding

Nopco FUA assures:

- Excellent fiber lubrication
- Elimination of static and fly
- No gumming of cards
- Elimination of glazing on leather rub roll aprons
- Cushioning of the leather

Result: Better carding—higher production—loftier, rounder roving



Spinning

Nopco FUA assures:

- Improved spinning—on mules or frames
- Fewer broken ends—because of increased yarn strength

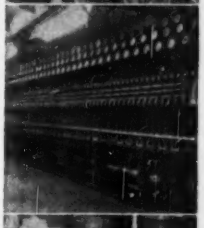
Result: Higher spinning production

Steaming

Nopco FUA

does not set in the yarn after steaming, nor in the fabric when greige goods are crabbed.

Result: No cloudy, shady piece dyeing



Fulling

Nopco FUA assures:

- Superior fulling (with excellent sudsing action) without addition of soaps or detergents
- Quick, uniform shrinkage—with good cover

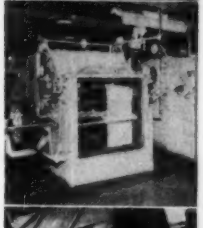
Result: Simpler, improved fulling

Scouring

Nopco FUA assures:

- Ultra-efficient scouring—again without addition of soaps or detergents
- Shorter rinsing time
- Very low residual oil content (0.2%)

Result: Better, faster scouring



No other wool oil duplicates the many advantages of Nopco FUA

Send for full information today.

NOPCO — EVOLVED THRU RESEARCH

NOPCO CHEMICAL COMPANY

Formerly National Oil Products Company

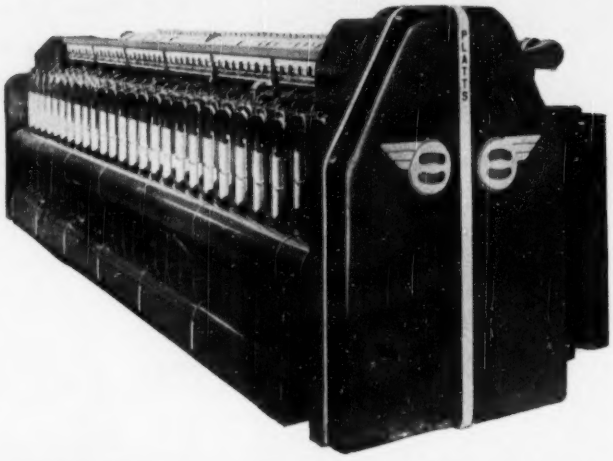
HARRISON, NEW JERSEY

*Reg. U. S. Pat. Off.

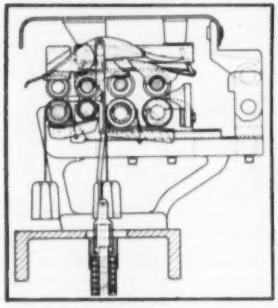
Branches: Boston • Chicago • Cedartown, Ga. • Richmond, Calif.

NEW PLATT HIGH DRAFT ROVING FRAME

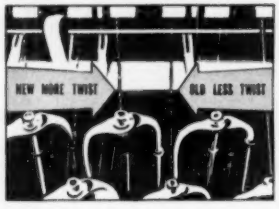
MS-2



Control of fiber and twist reaches greater perfection in the new Platt MS-2 High Draft Roving Frame. Patented flyers produce a roving of 20% greater strength, thus allowing a reduction in turns per inch and permitting higher front roller speeds. If you are interested in definitely increasing your production, you will want our eleven page booklet on "Roving" with seven mechanical detail illustrations of this new design machine. Write Atkinson, Haserick and Co.



TRIZONA: Graded and controlled drafting with the Trizona (Trade Mark) System will permit a wide range of drafts, using as it does 3 drafting zones with special patented guides for synchronized traverse and unprecedented fiber control.



BETTER TWISTING CONTROL: The new Patented Flyer overcomes breakage from tension in the flyer leg, around the presser, and onto the bobbin, as a greater proportion of the total twist is inserted between the nip of the front rollers and the top of the new flyer. The twist runs right up to the roller nip, giving greater twist regularity, and a more consolidated roving, permitting a greater length to be wound on the bobbin.

NEW FEATURES PERMIT GREATER MACHINE EFFICIENCY—HIGHER ROVING PRODUCTION

NEW ADVANTAGES

1. Production increases up to 15%.
2. Machine efficiency raised 20%.
3. End breakage rate reduced as much as 50%.
4. Waste accumulation decreased by 75%.
5. Unprecedented fiber control.
6. Remarkable roving strength and regularity.
7. Lighter work load.
8. Wide range of drafts.

NEW FEATURES

1. New patented flyer.
2. Patented fiber guides with synchronized traverse.
3. Integral motor drive.
4. Simplified electrical control.
5. Automatic measuring motion.
6. Building motion with gear change (optional).
7. Simplified gearing with easy and accessible changes.
8. Noise reduction.
9. Helical gearing for spindle and bobbin drives.
10. Neat disengaging motion.
11. Flush fitting rear inspection doors.
12. Centralized lubrication system.

MACHINERY OF:

PLATT BROS.

(Sales) Ltd. • Oldham, England

INCLUDING THE MACHINERY OF:

PLATT BROTHERS & CO., LTD. — DOBSON & BARLOW, LTD.
HOWARD & BULLOUGH, LTD. — BROOKS & DOXEY, LTD.
ASA LEES & CO., LTD.

INQUIRIES TO

SUPER MARKET of the Textile Industry

Atkinson, Haserick & Co.
BUSINESS ESTABLISHED 1823
Textile Machinery Agents and Engineers
211 CONGRESS STREET, BOSTON 6, MASS.
1639 W. MOREHEAD ST., CHARLOTTE, N. C.

DON'T MISS THIS MACHINE AT 16th Southern Textile Exposition—Oct. 2 to 7

The HOUGHTON LINE NEWS

Published by E. F. Houghton & Co., pioneers in heat treating and metal processing products since 1865

REG. U. S. PAT. OFF.

VOL. 18, NO. 3 AUGUST, 1950

...the "near editor's" viewpoint...

"Quickies" from a quick trip to France:

Seems to be no immediate prospect of a Communist government in France. "Commies" are a noisy minority, but the average Frenchman is too much of an individualist to be a Communist.

Apparently there is no picketing during strikes in France.

Fashion note: Daytime skirts are short and very tight, belted in at the waist until one wonders how the girls breathe.

Plant of Societe des Produits Houghton in Paris, destroyed by spectacular fire which made U. S. newsreels in 1948, now rebuilt.

CHAIRMAN OF THE BOARD.

Keep oil where it's wanted

Oil you can see is waste. Lubricants are a menace on floors, or when they drip on work in process. Use an oil that will stay put. Use Sta-Put for comb boxes, looms, cards, electric motors, and many other spots in the mill. Sta-Put is Houghton's treated oil, high in film strength and resistance to leakage. The free Sta-Put booklet tells you why.

HERE'S A NEW IDEA FOR WOOL

WHATEVER you've been looking for in a stock lubricant for woolen or worsted fibres — Houghton's new development — Sulfol 448 — seems to have it. Mill performance proves these points:

1. Sulfol 448 possesses definite *anti-static* properties. That was a principal objective, which mill men will appreciate. This oil won't eliminate all static, but it has certainly reduced it.

2. It is non-ionic . . . makes permanent emulsions unaffected by hard water or acid conditions. No danger of metallic soaps being formed.

3. Non-corrosive . . . will not rust card clothing or other machine parts.

4. Non-gumming . . . will not load cards, equipment or containers.

5. Non-oxidizing, non-staining, no tendency to turn rancid.

6. Moisture-free . . . Sulfol 448 is 100% lubricant.

7. Easily scoured out.

8. Wide range of application. Use Sulfol 448 for woolen, worsted or mixed fibres.

9. A top grade wool oil at a reasonable price.

One after another those merits have been proven in usage. For a trial in *your* mill, write us at the address below.

Do you buy on PRICE PER POUND?

Ever since Houghton began developing its line of surface active agents, the money value afforded by a concentrated product has been repeatedly emphasized. Our Surfax 1288 and/or W.O. for wetting out, our Cerfak N-100 and 1300 for detergency have been sold on that basis.

Now, to complete our line and to answer the demand for a combined wetting out and scouring agent which can be sold competitively, Houghton has perfected a new addition to the line, Cerfak No. 453.

This is a liquid, non-staining anionic-type which can be used for dye bath leveling, re-wetting, scouring, bleaching, etc. It is okay for use over a wide point and range . . . does not adversely affect enzymes.

It is not a dilution of other more concentrated Houghton agents, but is an entirely new development which can be offered at lower cost, yet possesses a surprisingly good money value. Write for Product Data Sheet and prices.

SIZING SPUN RAYON

Here is an item of interest to processors of spun rayon and staple fibers. Those fibers have to be sized, and the usual practice has been to use so-called gum supplied by the starch manufacturers, plus some type of fats or prepared size.

That there is something new under the sun in rayon sizing has been proven in a number of instances by Houghton size specialists, who have shown rayon mills that they can save money and obtain higher loom efficiency by using Houghton size compounds. The new feature is the addition of Houghto-Wax to the formula.

One instance recently reported — which will of course not hold good for all mills, each being an individual problem — was in the sizing of blend of dull viscose and acetate. Formerly 46 pounds of added ingredients were used in the formula in addition to the S. R. Gum. The Houghton formula required only 14 pounds.

A check on the looms showed far less shedding when Houghto-Size and Houghto-Wax were used. Shed collection from two looms for two days when running warps sized by the former method totaled 14 pounds. This was cut to 8 pounds when two looms were checked after a run on Houghton-sized warps.

Greater breaking strength was afforded, too — 14.9% over unsized, as against 4.0% increase given by the former sizing. And finally, better weaving; loom efficiency was increased from 90% to 96% by use of Houghton compounds. That will not always work out to the same figures, as no two installations are alike, but it gives an idea of what can be accomplished by careful study and check. The Houghton Man will be glad to work with you on sizing of staple fibers.

HAVE YOU A COPY?

This 160-page handbook on warp sizing, compiled from many years' experience in textile processing, is offered free of charge to textile mill men requesting it on their firm's letterhead. For others—$1.00 per copy.

E. F. HOUGHTON & CO.

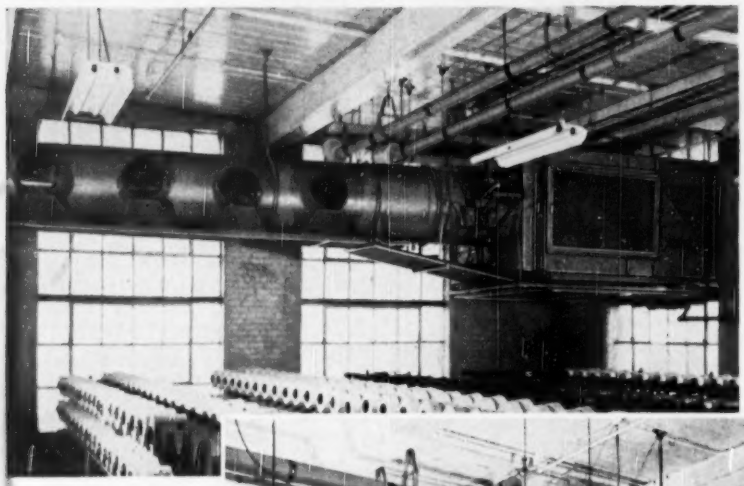
303 W. Lehigh Ave., Phila. 33, Pa.
825 W. Morehead St., Charlotte 6, N. C.

Houghton products for the Textile Industry:

Warp Sizes • Surface Active Agents
Wool Oils • Lubricants • Finishes
Textile Leathers • Belting

Bahnson Air Conditioning

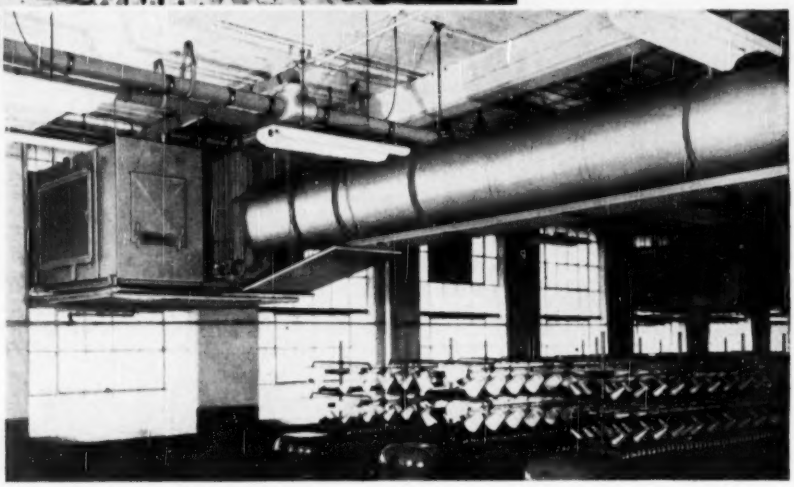
For Year 'Round Temperature and Humidity Control



The Bahnson Humiduct provides a basic unit system for evaporative cooling and controlled humidity to which refrigerative cooling, heating, air filtering in any combination can always be added. The Bahnson Humiduct unit is both flexible and economical, can be expanded or easily moved. No fixed, built-in installation or expensive apparatus housing required for air handling equipment.

↑
HUMIDUCT INSTALLATION TO PROVIDE EVAPORATIVE COOLING AND HUMIDITY CONTROL.

HUMIDUCT INSTALLATION PROVIDING HUMIDITY CONTROL WITH REFRIGERATIVE COOLING. →



Mills, "looking to the future," can approach the problem of eventual complete air-conditioning by degrees—starting with the Bahnson Humiduct basic unit as now functioning in many important installations.

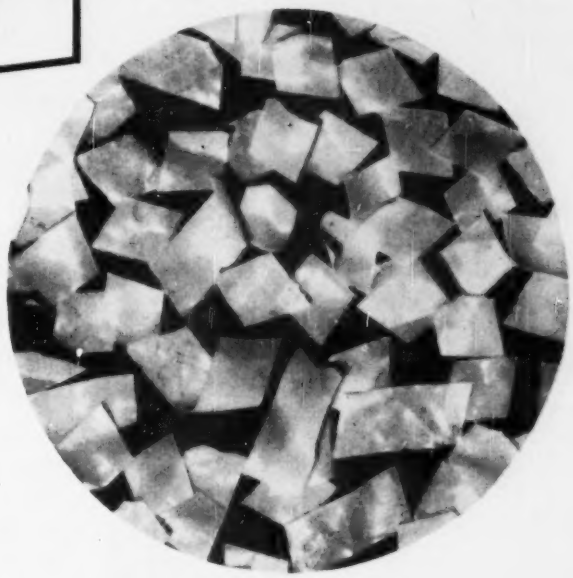
Bahnson Company
ENGINEERS AND MANUFACTURERS
WINSTON-SALEM, N. C.

→ ANNOUNCING !

Profine
TEXTILE FINISH

For BETTER, MORE SALEABLE YARN and FABRICS

Here is a finishing agent which will meet—or exceed—your most rigid specifications. A 100% active product in **flake form,** Profine has an unusually wide range of application. → →



As a medium for imparting softness or body to yarns and fabrics, Profine is a star performer. Self-emulsifiable, its emulsions are unusually stable. It has no effect on shade or fastness to light...no tendency to form objectionable odors or discoloration.

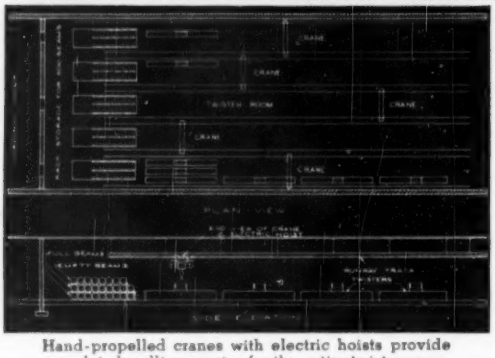
Profine has already proved its superiority in preparing cotton and rayon yarns for the many subsequent weaving and knitting operations. Its ability to soften these fibers and impart a pleasing hand to fabrics has already resulted in its adoption for many processing operations.

For example, to soften cotton knit underwear material and cotton broadcloth . . . to reduce the danger of water spotting on acetate lining materials . . . to reduce "dusting off" of the starch in back-filling cotton fabrics . . . to give body and drape to spun rayons.

Profine has already demonstrated its ability to up-grade fabrics. You can rely upon it to increase the saleability of your fabrics. A month's trial will prove it.

PROCTER & GAMBLE

TEXTILE DETERGENTS AND FINISHES
SALES DEPARTMENT, CINCINNATI 1, OHIO



Hand-propelled cranes with electric hoists provide complete handling service for the entire twister room.

In the ultra-modern twister room of the Excelsior Mills, Clemson, S. C. a Cleveland Tramrail system handles rayon beams from storage to twisting machines. Empty beams are returned on the same equipment.

It is a simple easy task for one man with the Tramrail equipment to convey a beam and set it in position on a twisting machine. Where required two or more beams can be mounted on a twister frame with equal ease. Tramrail equipment eliminates the need of floor trucks entirely and thereby removes a chief source of floor damage.

GET THIS BOOK!
BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
2865 EAST 287th ST. WICKLIFFE, OHIO

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

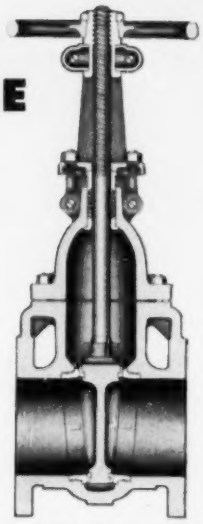
GIANT BLENDERS mean more uniform results, to give you a SUPERIOR PRODUCT

This series of powerful Giant Blenders is another example of the special equipment throughout our entire plant built to comply with our own specifications. These blenders make possible more uniformity in standardization of the dyes. Thanks to our more uniform methods of dye-making, Althouse superior dyestuffs enable YOU to produce a superior product!

ALTHOUSE
Chemical Company, Inc.
READING, PENNSYLVANIA

America's First Name in Super Light Fastness

Better piping for every job
...from one complete line...CRANE



No. 465½, Flanged Gate Working Pressures: up to 125 pounds steam; 200 pounds water, oil, gas. Sizes: 2 to 48-inch.

BUILT STRONGER TO LAST LONGER

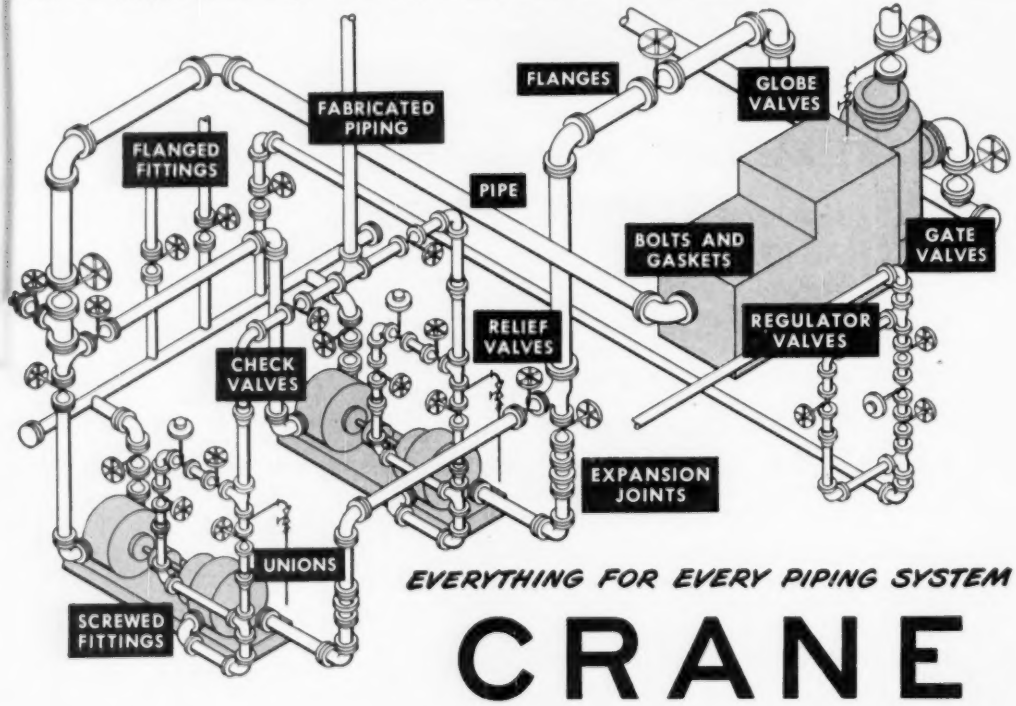
That's one reason Crane 125-Pound Iron Body Wedge Gates find such wide application. Improved elliptical body design with uniform wall thickness eliminates useless weight; provides high resistance to pressure loads. Tie-ribs between end and bonnet flanges increase resistance to line strains.

Check these other Crane design features. Greater flow capacity: straight-through ports assure streamline flow. Minimum maintenance: long disc guides reduce disc drag and wear on seating surfaces. Deep stuffing box—more packing—lengthens packing life. Easy operation: uniform pressure on packing eliminates stem binding. Flexible T-head disc-stem connection prevents side strain on stem.

Available in patterns for every need; non-rising stem, O. S. & Y., Quick-Opening and Underwriters'. Flanged or screwed ends. See your No. 49 Crane Catalog.

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

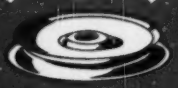
THIS BOILER FEED SYSTEM, FOR EXAMPLE, CAN BE COMPLETELY EQUIPPED ON ONE ORDER TO CRANE



EVERYTHING FOR EVERY PIPING SYSTEM

CRANE

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING



Ste-Hed-Co

industrial "diamond-hard" chrome plating

NOW AVAILABLE TO YOU!

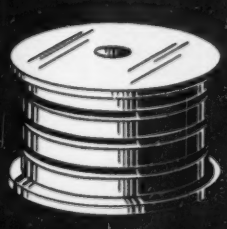
Yes — you can now Chrome Plate your products with "Diamond-Hard", the super-smooth, rust, friction and wear resisting finish—the complete facilities of our Philadelphia, Pa. and Greenville, S. C. plants are at your service.

Developed by skilled technicians over a period of many years for use on Ste-Hed-Co Products, unequalled "Diamond-Hard" has brought world fame to our many intricate, precision made Ste-Hed-Co Products used in the Textile Industry — now, expanded facilities at both plants enable us to offer this service to help you solve your Plating problems.

ADDITIONAL APPLICATIONS

For underground machine parts — refinishing worn bearing surfaces — flash chrome for molds, and thousands of commercial uses, specially prepared . . . specially plated . . . specially finished Ste-Hed-Co "Diamond-Hard" Chrome Plating can't be equalled for performance.

For information on Ste-Hed-Co Plating services such as nickel, cadmium and copper plating — write plant nearest to you — Philadelphia 32, Pa., 2100 W. Allegheny Ave.; Greenville, S. C., 621 E. McBee Ave.



STEEL HEDDLE MFG. CO.

2100 W. ALLEGHENY AVENUE PHILADELPHIA 32, PA.

Other Offices and Plants

Greenville, S. C. • Atlanta, Ga. • Greensboro, N. C. • Providence, R. I.

SOUTHERN SHUTTLES Parts Plant . . . Greenville, S. C.

A Division of STEEL HEDDLE MFG. CO.

STEEL HEDDLE COMPANY OF CANADA, LIMITED

6239 Notre Dame Street East Montreal, Canada

SLUDGE REMOVAL

SCOURING TEMPERATURES

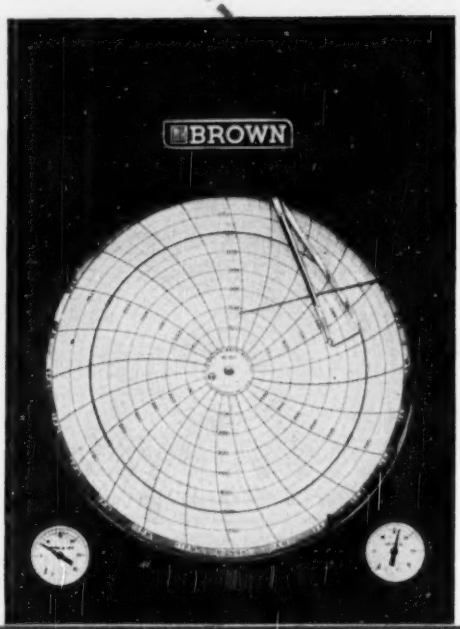
LIQUOR FLOWS

Take Advantage Of BROWN Function-Fitted Instrumentation For Wool Scouring Trains

ROLL LOADING

WEIGHT RECORDING

pH MEASUREMENT



Brown Recording Pneumatic Control Thermometer . . . for precise scouring bowl temperatures.

BROWN CONTROLS are function-fitted to every phase of the scouring operation . . . with a versatility that matches the specific requirements of individual trains. You can add to the efficiency of such subsequent operations as carding and combing . . . eliminating the possibility of "harshness" and "felting" . . . by Brown precision control of foreign matter removal.

A complete array of Brown measuring and controlling instruments has been engineered for scouring . . . one of the most important phases of wool processing. Included are controls for timed-dumping of sludge, for flow of scouring liquors, for continuous wool weighing, for positive roll loading, for pH of rinse water and for the highly important temperatures of bowls and dryers.

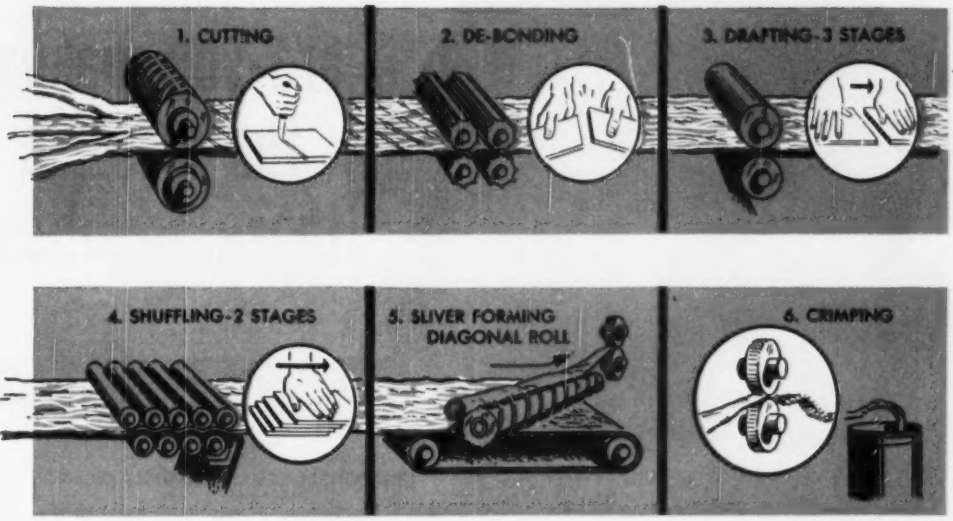
The payoff appears in the final results which your local Honeywell engineer is ready to discuss with you. Give him a call . . . he is as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4492 Wayne Avenue, Phila. 44, Pa. Offices in more than 80 principal cities of the United States, Canada and throughout the world.

FOR THE TEXTILE INDUSTRY

MINNEAPOLIS Honeywell BROWN INSTRUMENTS

IN ONE OPERATION...



THE WARNER & SWASEY-PACIFIC CONVERTER

changes synthetic tow to crimped sliver

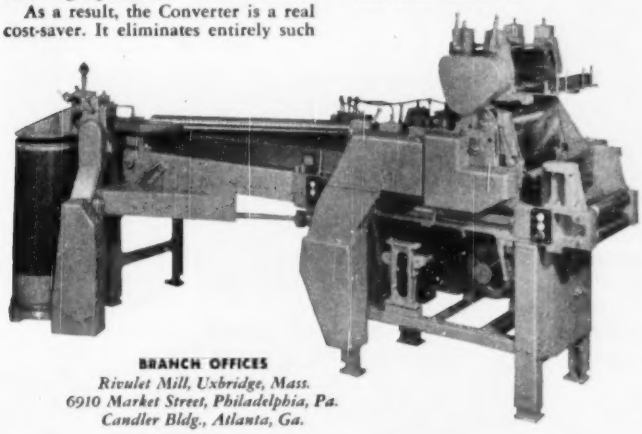
NOW, in one efficient operation, the Converter changes synthetic tow into cut staple ready for the drawing operations.

Fibers enter the Converter as continuous tow, where they are cut to the desired length, either uniform or varied, up to six inches maximum. They emerge as drawn crimped sliver, ready for further integrating and reducing operations.

As a result, the Converter is a real cost-saver. It eliminates entirely such operations as mixing, picking, carding, gilling, and combing. And the original cost of the machine is only a fraction of the cost of the machines it replaces. There is a big saving in floor space. And one operator can handle two or more Converters.

Our Field Engineer in your territory can give you complete information. Or write today for our new Converter Bulletin.

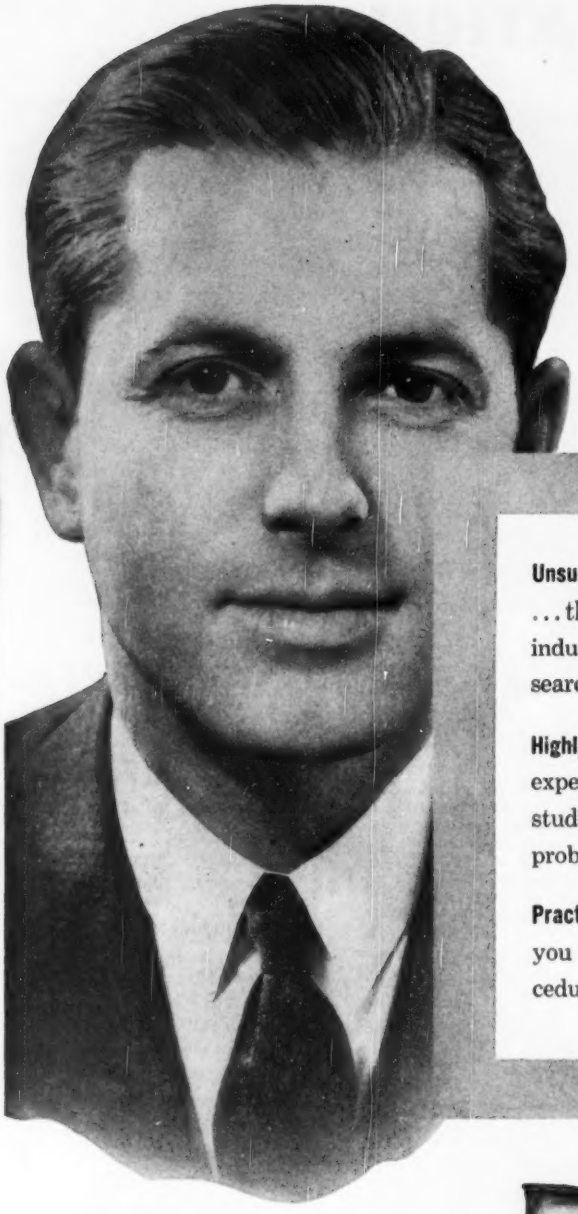
- Handles cuts of 3" to 6" in length
- All parts interchangeable
- Ruggedly designed and built
- Easy to maintain
- Minimum floor space needed
- Insures exact percentages of blend
- Retains finish, appearance, and strength



BRANCH OFFICES
Rivulet Mill, Uxbridge, Mass.
6910 Market Street, Philadelphia, Pa.
Candler Bldg., Atlanta, Ga.

WARNER & SWASEY
Cleveland
TEXTILE MACHINERY DIVISION

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS...WITH A WARNER & SWASEY



are you making the most of these facilities!

Unsurpassed starch chemistry research ... the foremost research men in the industry direct a continuing basic research program in starch chemistry.

Highly skilled technical service...widely experienced men make on-the-spot studies concerning your production problems.

Practical engineering service...to help you apply new methods, new procedures, in your production.

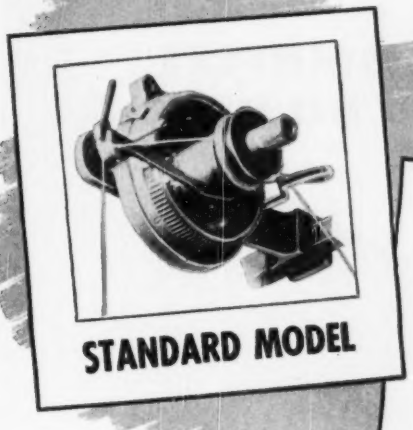
These service links can be extremely valuable to you in your various production problems ... to help you make better textiles more efficiently and economically with such uniform quality products as:

Globe and Eagle are registered trade-marks of Corn Products Refining Company, New York, N. Y.

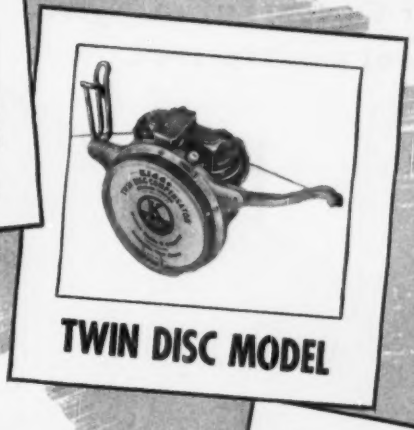
CORN PRODUCTS REFINING COMPANY • 17 BATTERY PLACE, NEW YORK 4, N. Y.

Tension Problems Bothering You?

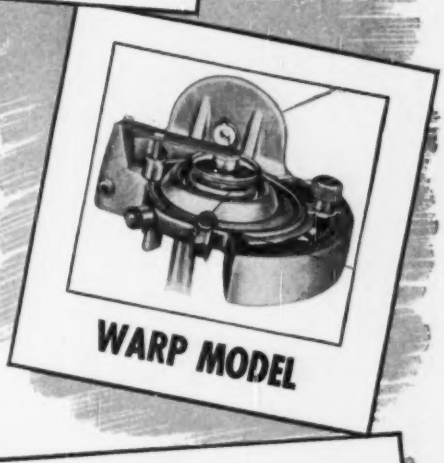
SEE Kidde



STANDARD MODEL



TWIN DISC MODEL



WARP MODEL

SPECIALISTS IN TEXTILE TENSIONS

Want to do away with the variables of yarn tensioning? Kidde Tension Compensators are precision devices that can do it for you.

The Standard Model, specially designed for average speeds and tensions, has proved its worth—saved time and money for many large mills—over 20,000 have been installed in the last year alone.

The Twin Disc Model is built to handle high speeds and tender yarns efficiently and economically—passes knots without difficulty.

The Warp Model, small and inexpensive, is just the thing for warp beams. It keeps beam tension uniform, keeps yarns from becoming over-stressed, keeps warp beams from buckling.

Walter Kidde & Company, Inc.
890 Main Street, Belleville 9, N. J.

Walter Kidde & Company, Inc.
890 Main Street, Belleville 9, N. J.

I am interested in controlling tension for _____ type yarn. I want to apply the tension at _____

Name .....

Address .....

City ..... State .....

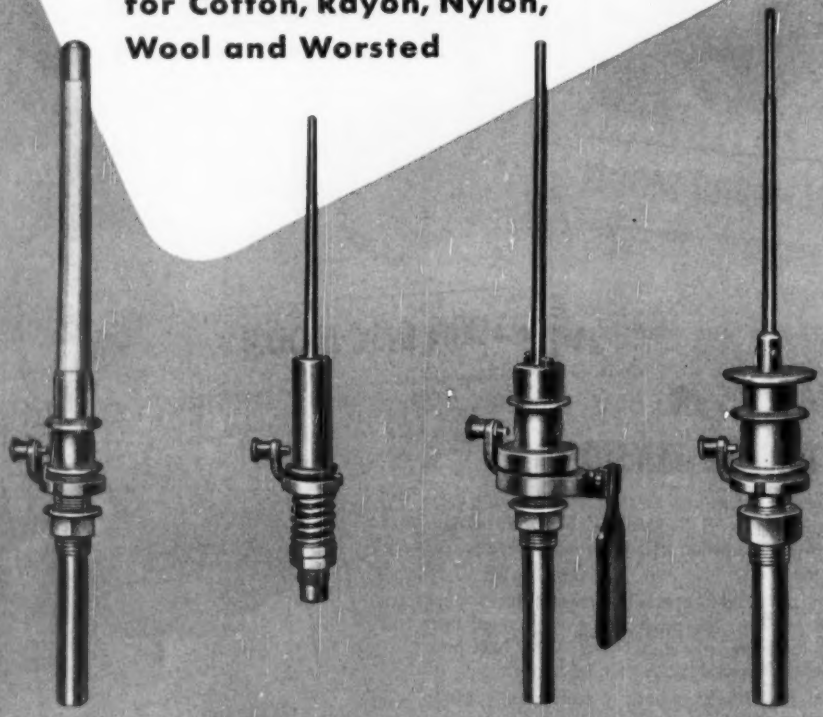
Kidde

Marquette

ROLLER BEARING SPINDLES

with FULL-FLOATING FOOTSTEP BEARING

for Cotton, Rayon, Nylon, Wool and Worsted



Modernize your old frames with Marquette Roller Bearing Spindles, or specify them on new frames. They save power, save tapes, save lubricant, and require less maintenance. They increase production through higher speeds, fewer ends down, and larger packages. Result: MORE YARN AT LOWER COST.

We'll be glad to prove the advantages of Marquette Roller Bearing Spindles in your mill. Contact our home office or one of our representatives for a test installation.

PROTECTED BY U. S. AND FOREIGN PATENTS, AND PATENTS PENDING

The Marquette METAL PRODUCTS CO.

CLEVELAND 10, OHIO

SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSES
FUEL OIL INJECTORS • PRECISION PARTS AND ASSEMBLIES

BYRD MILLER, WOODSIDE BLDG., GREENVILLE, S. C. • C. H. WHITE, 1329 PAMLICO DRIVE, GREENSBORO, N. C.
WILLIAM P. RUSSELL, BOX 778, ATLANTA, GA. • JOHN J. HALLISSY, 58 LIVINGSTON AVE., LOWELL, MASS.

Trends Indicated in

Industry Area Survey

Pension Plans

Textile Industries
Vol. 114 • August 1950

RETIREMENT or pension plans are in force in 15% of the organizations and 21% of the mills which were surveyed in a total-area sample by the editors of TEXTILE INDUSTRIES. In the mills surveyed, 25% of the employees were covered by pension plans; the 21% of the mills having pension plans represent 22% of the spindles sampled.

A large majority of the pension funds are contributed to solely by the company, though a few have a program whereby the employee may participate. All plans studied in the survey pay at age 65, but many contain provisions for total disability.

Mills which do not have a formal pension plan often care for super-annuated, loyal, long-term employees on some basis.

Most of the retirement plans are based on the earnings and service of the employee. Also, the funds customarily are placed in trust, though a few are handled by the company.

About half of the plans begin with one year's service by the employee, and some do not become effective until the employee has been with the company 20 years.

—J. C. F.

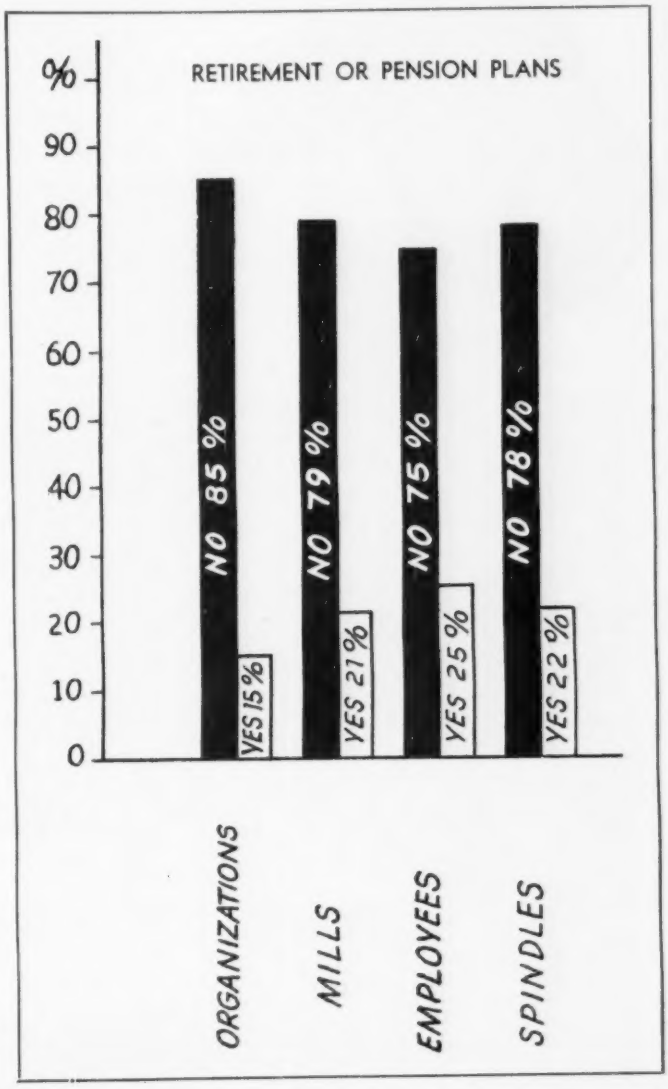
HOW SURVEY WAS CONDUCTED

THE SURVEY was conducted in several southern states on personal visits to the mills by the editors of TEXTILE INDUSTRIES. The total-area sample method was used, whereby all of the mills within a chosen radius were polled. Enough areas were used to give a good sample. Knitting and woolen mills were not included.

To check sampling procedure, the sample of one state was enlarged to include approximately sixty per cent of the spindles. As a further check on the reliability of the sample, questions were injected into the questionnaire on which previously compiled industry figures are available.

Although any method of statistical selection may be criticized, the editors believe that the sample is large enough to indicate a trend in the areas covered.

Even though the double checks made from known figures prove the reliability of the survey, readers are cautioned against an attempt at projecting the percentages for application to other areas or other branches of the industry.



Note: An "organization" may be composed of only one plant, or an organization may represent several plants. The term "mill" indicates a single unit. Thus, where an organization answers, one or more mills may be included in the total. Few industry statistics are based on organizations; most statistics apply to mills, spindles, or employees.

Juilliard
100% VIRGIN WOOL
© A. D. J. CO. INC.

Photo and Trade-Mark Courtesy of A. D. Juilliard & Co., Inc.

excellent references

TOP FLIGHT MILLS have shown their preference. Among sizing starches, for instance, they've found NALEX 40 minimizes the variables affecting slashing operations. Since its viscosity is chemically controlled, NALEX 40 sizes worsted yarns *uniformly* . . . resists jelling in the size box!

Moreover, NALEX 40 provides tough, pliable films. Excellent binding properties. Deep penetration. It pays off with a smooth closed in effect after weaving . . . fewer imperfections . . . full color retention!

Have you got a job for NALEX 40?

National also produces: AMBERTEX a heavy-bodied thickener for white discharge, rapidogen and vat color printing; CLEARFILM for sheer, lustrous finishes; FLOTEX to replace natural gums for printing; TABLE ADHESIVE for screen printing; FLOCK ADHESIVE 970 for chenille flock printing; HOOSIER PEARL CORN STARCH . . . THIN BOILING CORN STARCH . . . CHLORINATED CORN STARCH . . . and DEXTRINES.

Address: 270 Madison Ave., New York 16; Boston, Philadelphia, Atlanta, Indianapolis, Chicago, San Francisco, and other principal cities. *In Canada:* National Adhesives (Canada) Ltd., Toronto and Montreal. *In England:* National Adhesives Ltd., Slough.

National
STARCH PRODUCTS

nalex 40 FOR WORSTED WARP SIZING

NEWS in BRIEF

As Textiles Go, So Goes the Nation. Impairment of markets for textiles cannot be tolerated without bringing collapse in the entire economy of this country, said W. Ray Bell, president of Association of Cotton Textile Merchants of New York in a recent statement before the Committee for Reciprocity Information? If the problem of textile employment abroad were extreme, and if it were a choice of relief funds abroad or relief funds at home where our operatives are sacrificed, 30,000 British textile workers, or 40,000 Belgian workers, or 100,000 or more workers in cotton mills in Japan or India, could be carried on relief for the price of 10,000 in the United States.

Cotton Improvement in Ga. The Cotton Manufacturers Association of Georgia presented a trophy for outstanding cotton improvement work in 1949 to the Tyrone (Ga.) One-Variety Cotton Improvement Association. The presentation was made by T. M. Forbes, executive vice-president of the cotton manufacturers' association.

To Remove Lint at Warpers. In order to reduce the amount of lint usually present around high speed warpers, one mill is experimenting with a grille under the machine through which the air and lint are drawn, with the air being filtered and recirculated.

Wool Textile Quota Plan. A quota plan which would limit the importation of foreign wool textiles and articles made from such fabrics in any one year to five per cent of domestic yardage production for the preceding year has been proposed to the Committee for Reciprocity Information by the Forstmann Woolen Company.

Serviceability of Textiles Omitted. Textile apparel manufacturers have been charged with not cooperating in programs to establish serviceability of fabrics and garments. A spokesman for the Better Business Bureau states that manufacturers generally are remaining aloof from BBB fabrics programs.

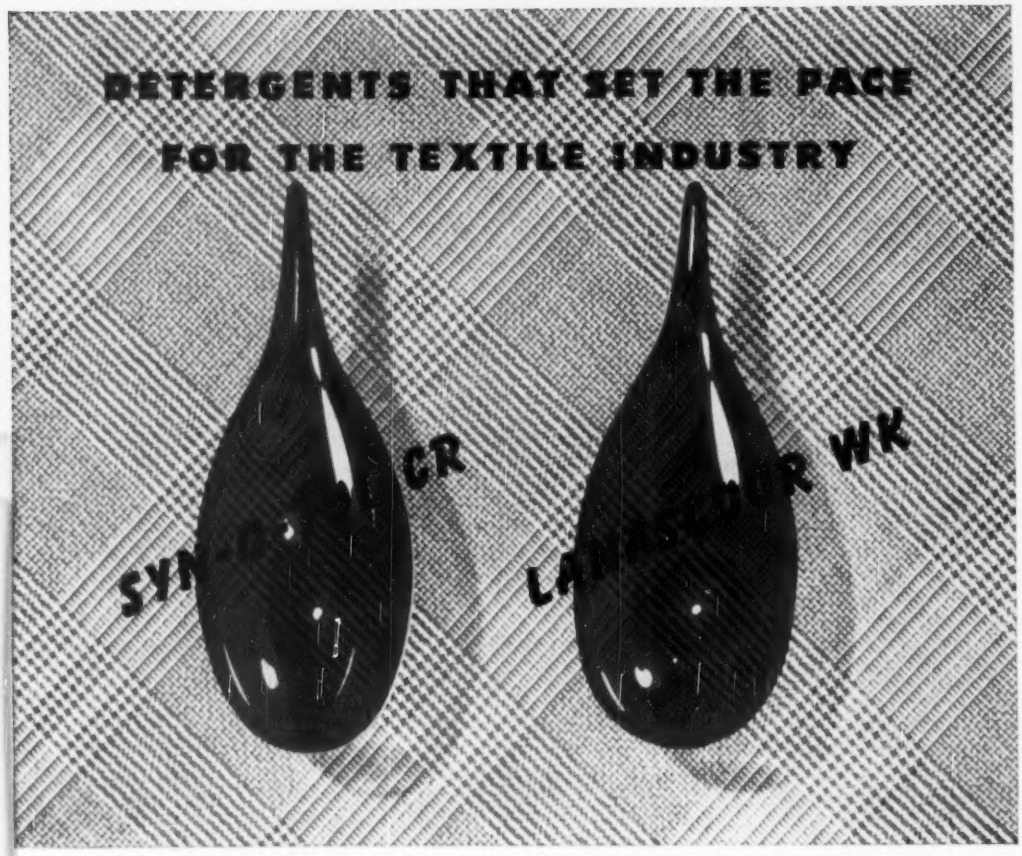
Standards for Rayon Fabrics. Proposed American standards for rayon fabrics have been sent to 32 national organizations that make up the American Standards Association's sectional committee on rayon fabrics. Fifty-one specifications and 29 test methods are included in the 160-page book. The National Retail Dry Goods Association, sponsor for the project, is

STONEWALL HILLBILLY TRIO FINALISTS AT TED MACK'S SHOW

Tommy Crane, 14, Jimmy Crane, 11, and Johnny Pritchett, 13, three-time winners of the Ted Mack "Original Amateur Hour," vied for a $2,000 scholarship and gold trophy on June 15.

The young Mississippians arrived in New York chaperoned by Barrett Crane, a loom fixer employed for 25 years by Erwin Cotton Mills Company, which owns and operates the textile plant in Stonewall. John Pritchett's father, Frank, and his mother are employed in the mill in the finishing department.

The boys wear blue jeans made from denim which the Stonewall mill manufactures.



SYN-O-TOL CR

Concentrated, Non-Sulfonated Detergent

SYN-O-TOL CR is a combination nonionic—anionic detergent, wetting agent and penetrant . . . contains less than 5% moisture!

SYN-O-TOL CR is a highly efficient detergent that provides a viscous "soapy" stock at about 20% concentration. It combines the advantages of high concentration with ease of handling.

SYN-O-TOL CR is highly effective in removing sizing material, oil, dirt, etc. . . . won't leave goods harsh and wiry . . . makes an ideal "soaping" agent for washing prints, provides synergistic action to detergent systems.

LANASCOUR WK

Synergistic Detergent for Wool Scouring

LANASCOUR WK combines high detergency action with superior penetrating power . . . produces resilient and lofty scoured wool.

LANASCOUR WK is economical and easy to use . . . scours gently and thoroughly in hard or soft water . . . holds dirt in suspension and won't form insoluble curds or scum.

In the scouring of wool, backwashing of tops, wetting of cotton-wool union fabrics in the fulling mill, processing blends of nylon or viscose staple and wool, LANASCOUR WK has no equal in effectiveness or economy!

For further information, send for technical data on LANASCOUR WK and SYN-O-TOL CR.

TECHNICAL PRODUCTS DIVISION

E. F. DREW & CO., Inc.

15 EAST 26th STREET, NEW YORK 10, N. Y.

DREW PRODUCTS

Branch Offices: CHICAGO • BOSTON • PHILADELPHIA • GREENVILLE, S.C. • MONTREAL, CANADA • AJAX, CANADA • RIO De JANEIRO, BRAZIL • BUENOS AIRES, ARGENTINA

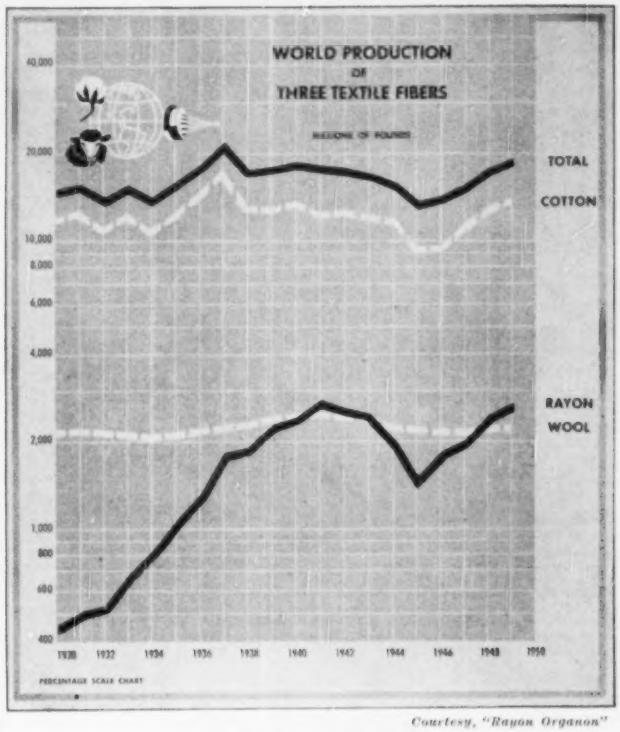
asking the associations and societies to study the standards carefully and to vote on whether or not they should be recommended for publication as American standards.

Radioactive Research. Radioactive tracer techniques have been successfully used for the first time in tracing the movement of salts and dyes within individual fibers, according to the Textile Research Institute, Inc. Three independent components of the dyebath have been followed simultaneously. Results have not yet been evaluated; however, it is expected that in the next six months to a year considerable progress will be made toward understanding what goes on within a fiber in a dye bath. It may prove possible to measure semi-quantitatively the distribution of the dye within the fiber using radio-active tracers. The Institute is working on the synthesis of "tagged" acetate dyes and direct dyes for cellulose, having successfully synthesized a "tagged" acid dye for wool.

Industrial Engineering Institute. A two-week course of instruction has been planned by the School of Industrial Engineering in cooperation with the Engineering Extension Division of the Georgia Institute of Technology in Atlanta as an annual service to industries in the area. The Institute program for 1950, scheduled for Sept. 11-22, will deal with topics considered most in demand, based on a survey of local industries. Inquiries and registrations should be addressed to C. H. Taylor, coordinator.

Industrial Preparedness. The Quartermaster Corps is moving forward with its industrial mobilization program so that industry will be prepared, on short notice, to supply at least the most critical military items in sufficient amounts to equip the army in the event of another war.

Knitting Exhibition. The first exhibition of knitting machinery and accessories to be held in Britain in fourteen years will take place in Granby Hall, Leicester, England, from October 11 to 21, 1950, under the auspices of Textile Recorder (Machinery & Accessories) Exhibitions Ltd., the British textile machinery industry's own exhibition company.



Courtesy, "Rayon Organon"

WORLD FIBER PRODUCTION

This chart shows the trends in fiber production since 1930. Cotton continues as the most important of the four fibers in terms of poundage produced, amounting to 74% of the total, followed by rayon with 14%, wool 12%, and silk (not indicated) nominal. Compared with the prewar years, 1939-1940, rayon has increased its relative standing by 1½% and cotton by 1%; whereas wool lost 1½% and silk lost 1%.

The 1949 production of cotton represented an increase of 9% over the previous year, United States output alone increasing 9%, while the rest of the world's cotton output increased 10%. U. S. cotton output accounted for 54% of the world's commercial cotton crop last year.

Billion Dollars in New Taxes. Colleges and foundations which own and operate factories, hotels, radio stations, airports, department stores, and other competitive commercial enterprises are scheduled to be taxed in the revenue bill that is now being written. Labor unions, building and loan associations, and mutual savings banks are also on the list of loopholes to be closed.

Roper Hosiery Survey Available. A 32-page report on the American consumer's use of and attitudes toward hosiery, made by Elmo Roper, analyst, was made avail-

*COLOR

For maximum production . . . top efficiency . . . lowest operating cost, give your machines the finest in lubricants—give them Tycol oils and greases.

Tycol lubricants are made to meet every lubrication need of industry—from roll neck greases for steel mills to spindle oils for textile plants.

Each Tycol lubricant is subjected to rigid tests during manufacture. This control assures the required lubrication characteristics—*COLOR, penetration, viscosity, to name a few—for maximum performance of that particular product. At every step from selection of crudes to blending of the finished product, Tycol lubricants provide maximum lubricating efficiency which means greater economy, longer life for every type of equipment.

Tide Water Associated will be glad to assist you in selecting the Tycol lubricant best suited to your specific need. Call or write your nearest office for further details.

TYCOL

INDUSTRIAL LUBRICANTS

Boston • Charlotte, N. C. • Pittsburgh • Philadelphia • Chicago Detroit • Tulsa • Cleveland San Francisco • Toronto, Canada

TIDE WATER ASSOCIATED OIL COMPANY

17 BATTERY PLACE · NEW YORK 4, N.Y.

*LEARN WHAT THIS PRODUCT CHARACTERISTIC MEANS TO YOU — READ "LUBRICANIA"

This informative handbook, "Tide Water Associated Lubricania," gives clear, concise descriptions of the basic tests used to determine important properties of oils and greases. For your free copy, write to Tide Water Associated Oil Company, 17 Battery Place, New York 4, N. Y.

REFINERS AND MARKETERS OF VEEDOL — THE WORLD'S MOST FAMOUS MOTOR OIL

able early in July. The new booklet, "What American Women Think and Do About Hosiery," highlights the more important findings of the survey.

Gin Lint Cleaners to Be Tested. Tests of cotton gin lint cleaners will be run during the current season in all four major sections of the cotton belt, the National Cotton Council's cotton quality steering committee decided at its closing sessions, June 16.

Ga. Tech Graduates Large Textile Class. The A. French Textile School of the Georgia Institute of Technology graduated the largest class in its history on June 14. There was a job available for every graduate, according to Herman A. Dickert, director of the school. A total of 108 seniors received diplomas.

Carpet Production Up. Production of wool carpets and rugs in April, 1950, amounted to 7,087,000 square yards. The April figure shows an increase of 10% over April, 1949, and a decrease of 12% from March, 1950.

Avondale "Way of Life" Draws Praise. In an article entitled "Where Labor and Management Work Together as a Team" Liberty Magazine (July) tells the story of how the Comer family's policies have helped create the Avondale Mill communities where people work together for the benefit of all. Home ownership, low cost vacation camps, educational facilities, and other tangible results of the Avondale program are described in detail.

"Corduroy Chenille" a Misnomer. Numerous advertisers currently are describing a fabric used in making tufted robes and bedspreads as "corduroy chenille." The fabric so identified is neither a corduroy nor a "chenille" and the combined expression "corduroy chenille" is a double misnomer, according to the National Better Business Bureau. Tufting in both corduroy and chenille is produced in the weaving, it is said.

Italian Textile Missions Visit U. S. 75 members of eight Italian textile missions will tour the United States in the second half of the year under the ERP technical assistance program. The missions are to visit textile mills, textile machinery plants, trade associations, department stores, and shopping centers. All the leading textile fields except cotton are represented in the missions.

New Dye Method for Synthetics. A method of dyeing synthetic polymide fibers with hyperthermarlized liquid dyebath under pressure has been developed by A. P. Roy, director of research for Dean and Sherk Company. George Hacker, Gaston County Dyeing Machine Company, Stanley, N. C., manufactured the equipment used in the process. An application for patent covering the method and the equipment has been filed with an assignment by Roy and Hacker to Dean and Sherk Company.

Degrees Awarded by ITT. The Institute of Textile Technology awarded eleven men the degree of master of science at its second annual graduation exercises held on the Institute grounds, June 13.

Mills Want Cotton Classing Conditions Standardized. Several large manufacturers of cotton textiles have asserted that government cotton classers should be required to use cotton classing lights and air conditioning equipment of specific character to assure identical conditions every time cotton sample standards are classed. In this way the cotton classers at the mills and the man who officially classed the standard samples may have identical conditions under which to examine the cotton when comparing the sample standards with purchased cotton.

Textron Moves Ahead on Puerto Rico. A 24-hour production schedule has been launched at the Textron plant in Ponce, Puerto Rico. The $4-million unit is a 25,000 spindle grey goods cotton mill.

Unions Entitled to Payroll Data. The National Labor Relations Board has ruled that a union is entitled to know the names, positions, and wage rates of individual employees for the year preceding contract negotiations. The board declared that an employer's failure to disclose such information on request of a union is an unlawful refusal to bargain.

Nylon "Crepe" Constructions. The Women's Hosiery Advisory Committee has recommended that stockings made of nylon or other thermoplastic yarns should not be described as "crepe" in the present stage of development of such yarns. Stockings described as "crepe" should have the qualities of crepe which are, according to the committee, "a rough, crepe-

29TH ANNUAL AATCC CONVENTION PLANS

"Advancement, Achievement, Through Continued Cooperation" will be the theme of the 29th annual convention of the American Association of Textile Chemists and Colorists to be held at Wentworth-by-the-Sea, Portsmouth, N. H., Sept. 28-30.

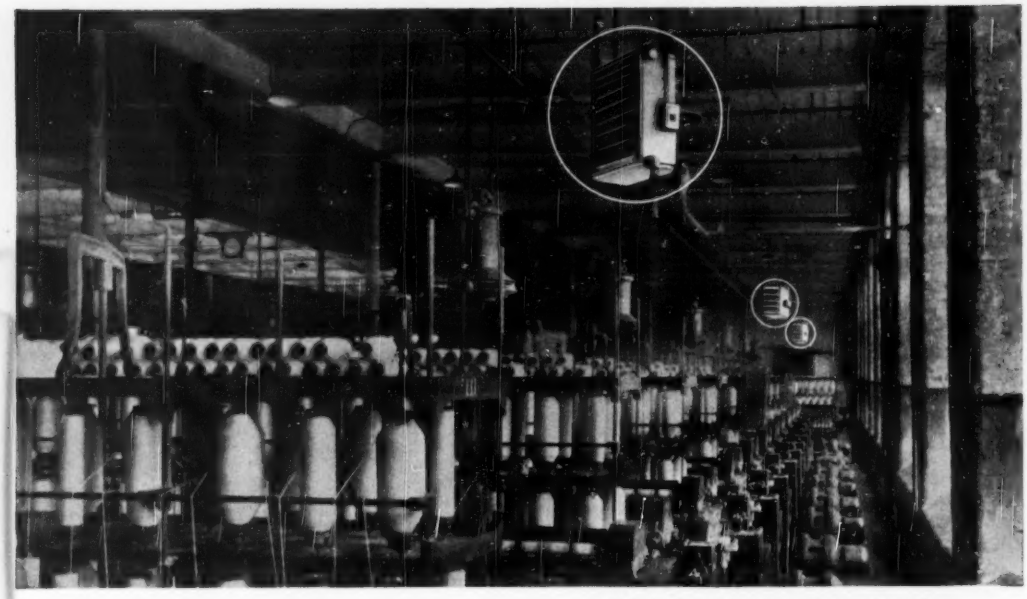
Sponsored by the Rhode Island Section, the gathering will provide for those attending a well balanced and highly informative technical program as well as excellent recreational activities. A special program will be arranged for the ladies.

Exhibits will reflect scientific and technological progress in textile and allied industries.

Accommodations are available for approximately 1400 persons. Hotel reservations, including room assignments, will be made in advance. Hotels will not accept any requests for reservations. All requests must be handled by the Reservation Committee.

SOLVE YOUR HEATING PROBLEM NOW

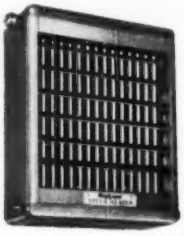
. . . EFFICIENTLY, ECONOMICALLY



Mill installation showing positioning of Speedheaters for maximum heat distribution over large area.

Sturtevant Textile Mill Speedheaters® are specially designed to meet your particular heating needs. High speed textile equipment throws off lint and dust which in time would clog ordinary unit heaters. The absence of fins, plus the round condensing tube construction of Speedheaters, makes it difficult for lint and dirt to gather and clog the heating element. Matter which does collect dries quickly, and is carried away in the air stream.

Contact your plumbing and heating contractor for information, or write Westinghouse Electric Corp., Sturtevant Division, Hyde Park, Boston 36, Massachusetts.



OVER AND ABOVE THE SPECIAL DESIGN OF TEXTILE SPEEDHEATERS YOU GET THESE PLUS FEATURES IN EVERY UNIT:

1. **Constant Maximum Heating Capacity . . .** freedom from lint permits maximum air flow.
2. **Easy Installation . . .** flat top construction permits installation directly to ceiling. Soft steel hangers can be shaped on job.
3. **Low Cost Operation . . .** leak-free design and curved propeller blades keep operating costs low.
4. **Fast Heat Delivery . . .** Speedheaters go to work when turned on; no "warm-up" time and fuel lost.
5. **Efficient Distribution . . .** adjustable louvers direct heat down into working areas where it is needed.

YOU CAN BE SURE . . . IF IT'S

Westinghouse

A-80199

like surface, dull in appearance, having a high degree of elasticity and snag-resistance, and a longer useful life."

PTI Graduates. One hundred and nine seniors, the largest class in the history of the school, received their awards at the commencement exercises of the Philadelphia Textile Institute, June 24, at Germantown, Pa.

New Synthetic Fiber. The Du Pont Company is evaluating a new synthetic textile fiber on an experimental scale. Limited quantities of fabrics made from this product, known tentatively as Fiber V, are currently being tested to determine the commercial possibilities of the fiber. Technically, the material is a condensation polymer obtained from ethylene glycol and terephthalic acid. It is not chemically related to nylon.

Pad Dyeing Patent. A patent on a method of pad dyeing cellulose derivative fabrics has been assigned the Celanese Corporation of America. The patent covers seven claims and was granted to Wilfred T. Normand of Cumberland, Md. In the process, fibers are colored and have a proteinaceous size. Fabrics of the sized yarns are padded with a dyestuff solution for the organic derivative of cellulose material in an aqueous medium. The dyed fabric is scoured to remove the size.

Instrument Determines Effective Fiber Diameter of Wool. Dr. James H. Wakelin of Princeton University has announced a method of determining effective fiber diameters of wool through use of a vibroscope. The instrument, which can be constructed and used with little difficulty in the laboratory, provides a rapid means of acquiring data without the laborious use of a microbalance.

Cotton for Luggage. Cotton is the principal material used in the manufacture of luggage, accounting for 43% of all materials used in the construction of hand luggage, according to the National Cotton Council. Approximately 13,500 bales are consumed annually for this purpose.

TRIPLE PURPOSE COOLERS IDEAL FOR OFFICES

For use in private or executive offices, board rooms, lawyers', and doctors' offices, a new compartment-type water cooler provides 50 degree drinking water for 25 to 30 persons. Produced by the Westinghouse Electric Corp., the cooler has a 25-38 degree refrigerated storage space for food, beverages, or pharmaceuticals; and a freezing unit which produces three and a half pounds of ice cubes at one freezing. As many as 40 half-pint bottles of milk, or 29 beverage bottles can be kept in the stainless steel storage compartment at one time.

A newly developed control enables the cooler to maintain three different temperatures simultaneously in the three separate compartments; the water cooling chamber, freezer, and refrigerated space.

High Rayon Production. World rayon production in 1949 came within 4 per cent of the all-time record production in 1941, according to a recent issue of "Rayon Organon." During 1949, a total of 2,704,620,000 pounds were produced throughout the world, compared to 2,811,890,000 pounds in 1941.

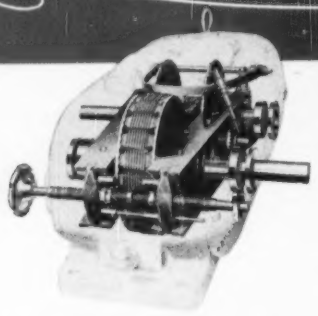
Real Wages Increase. The average employee's real hourly wages will double in about 30 years if production per manhour continues to rise at the same average rate as in the past, according to an analysis completed recently by Committee for Economic Development. Defined: real wages are what money can buy; and in the last 50 years real wages per hour in the United States have increased more than three-fold. Today the average employee receives about $1.33 an hour. Back in 1900 the average was about 43 cents an hour in terms of 1949 prices. This represents an increase of approximately 2.5 per cent per manhour per year.

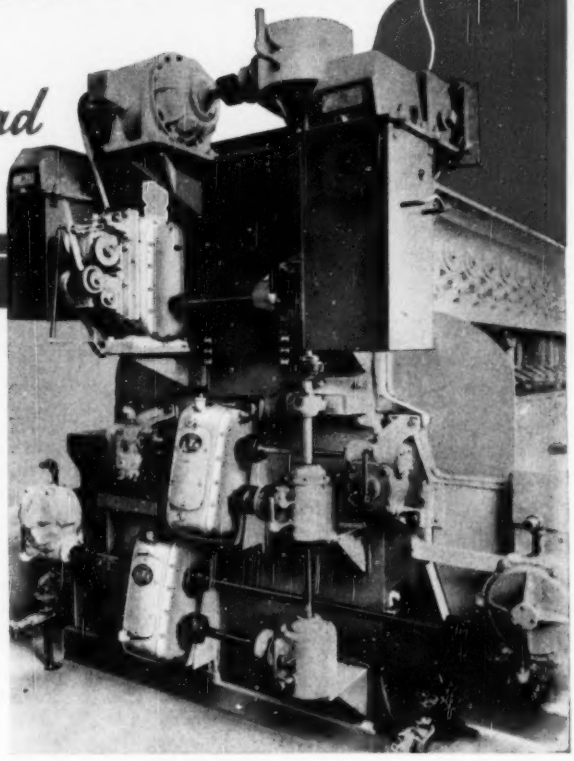
Newsmen Offer Aid on Press Relations. Relations between the press and industry are improving, but more adequate understanding by businessmen of the problems and functions of newspapers is still needed so that cooperation may overcome remaining areas of misunderstanding. The foregoing reaction was the consensus of 100 newspaper editors and reporters as to how business might better its press relations. The replies were used to prepare a "Manual on Press Relations" for The Textile Committee on Public Relations. The booklet is available upon request to Dudley, Anderson & Yutzy, 551 Fifth Avenue, New York 17, N. Y.

Radioactive Golf Balls. Answer to the duffer's prayer is the new radioactive golf ball. A caddy, carrying a small portable Geiger counter, can locate the "atomic" ball even when hidden in dense woods or deep rough. Minute quantities of radioactive materials are embedded under the cover of the ball. Production of the activated golf balls by B. F. Goodrich is experimental at this time; no immediate sale is contemplated at present. A new Geiger counter weighs 10 ounces and costs $25.

LINK-BELT P.I.V. DRIVE

controls denier of Rayon Thread





Three P.I.V. Variable Speed Drives control metering pump and godet wheel speeds within extremely close limits on this double-godet 128-spindle rayon pot spinning machine. One P.I.V. accurately maintains speed of viscose metering pumps. Upper and lower godet wheels are driven individually by the other P.I.V.'s whose controlled difference in speed determine amount of stretch, and thus the denier of rayon thread.

When speed of a machine or a process is a factor in the quality of the product, the Link-Belt P.I.V. variable speed drive is the most satisfactory means of obtaining this end.

Power is transmitted efficiently from the driving to the driven shaft, by a unique steel chain, which engages radial grooves in steel wheels, giving positive, non-slip transmission. Ratio of input to output speeds is instantly changed by turning a small hand wheel, while the machine is running. Speed ratios are stepless, can be set at any point throughout the range of the unit. Once adjusted, the speed remains constant, without slip or hunting.

All-Metal, enclosed, self-contained P.I.V. drive is a precision product made in eight styles from ½ h.p. to 25 h.p. in speed ranges to suit innumerable applications. Send for Book No. 1874-B giving full details and valuable application suggestions.

LINK-BELT COMPANY

Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Johannesburg. Offices in Principal Cities.

11.851

Wherever operation of differential-speed equipment demands absolutely reliable positive control . . . . INDUSTRY USES

LINK-BELT

P.I.V. Variable Speed Drive

AN

EXECUTIVE VIEWS

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

The Torquay Conferences

AT A SEAPORT and winter resort in England called Torquay the fate of the American textile industry may largely be determined next month. Located in Devon, Torquay has long been famous as a resort site. What happens there in September may add to its already interesting history.

At that time the United States Government will negotiate with approximately twenty-three countries concerning possible revisions in tariffs. These negotiations will apply to a long list of items, but we in the textile industry are mainly concerned with possible concessions which may be granted foreign nations and which might enable them to swamp our markets with cheaply made goods. Most of us remember what Japan did to the American cotton textile industry around 1937, and we know that we cannot compete with this type of competition.

No Bargaining Upward

Some of the altruistic representatives of our State Department may contend that the Torquay conferences will provide an opportunity to air all viewpoints and that we should not be too pessimistic with regard to the outcome. However, it is difficult to believe that our State Department will negotiate upward any of the tariff rates now in existence. As a result of the "free trade" movement which has swept the American political scene during the past two decades, the extent of reductions which have already been made on cotton goods tariffs now averages about one-third of the original rates established in 1930. In some cases the reductions amount to as much as 75 per cent.

It would be extremely naive for us to believe that Mr. Truman or Mr. Acheson or any of their spokesmen or agents will argue now for protection for American industry. To advocate tariff protection now would be for them to abrogate a stand which has been stressed repeatedly. There is very little in the news these days which could possibly lead us to believe that the Torquay negotiations will result in more protection for the American textile industry.

Not Enough Time

Indicative of the evidence which leads to this conclusion is the fact that the industry was given only about thirty days notice prior to the opening of preliminary hearings before the Committee for Reciprocity Information. The notice of these hearings was issued on April 15, and the hearings themselves began on May 24. Considering the fact that approximately 500 individual items would be affected by the negotiations involving textile products, it is not

HOCKANUM MILLS' WEAVER WINS $1000 FOR PAPER ON AMERICAN WAY

Eudore A. Pierre, a weaver at the Hockanum Mills, Rockville, Connecticut, receives a $1000 check from Gene Tunney. This check was the first prize offered by the National Association of Wool Manufacturers in an essay contest for employees of member mills on the American Way. J. P. Stevens, Jr., Walter T. Goddard, and Mrs. Pierre witness the ceremony.

Typical excerpts from Mr. Pierre's essay:

"I am a worker in the woolen textile industry in America, and being a citizen of this great democracy in which we live I am in a position to enjoy to the fullest the best that America has to offer. No other country in the world gives to the common man the right to enjoy the privileges that we take as a matter of course. . . .

"I even like the tired feeling that I have at night when I look over the cloth I've helped to produce, and I know that I have labored because of my own free will and volition, and not because I have been made to do so as a slave of the government or a serf of the mill owners."

C_6H_5CHO
BENZALDEHYDE
FROM
TENNESSEE

Are you completely satisfied with your present supply service for commercial and fine chemicals?

Can you count on uniform quality, ample supply, perfect delivery?

If you can't give an immediate "yes" to these important questions then you'd better see the men from Tennessee. We supply *good chemicals* on the *good business* basis of more service for the buyer. . . whether your orders be large or small. Request our latest price list and specifications. Better still, place an order; let us demonstrate the service you get when you order chemicals from Tennessee.

TENNESSEE
PRODUCTS & CHEMICAL
Corporation
NASHVILLE, TENNESSEE

difficult to see that insufficient time was given the industry to prepare its case.

Whether or not the Government intended to thus "hamstring" the mills, it nevertheless leaves us with the impression that the cards may be stacked against us to begin with. It is impossible for individual mills to cope with a problem of this magnitude, and yet in the time allowed it was almost as impossible for the various trade associations to consolidate sufficient information, coordinate their efforts, prepare written and oral statements and arrange for the appearance of qualified witnesses.

To one with cynical inclinations it might even appear that the Government did not want the affected industries to present too strong a case.

Case for Cotton Goods

When the main testimony of the cotton textile industry was presented before the Committee for Reciprocity Information on June 7, the main burden of the testimony was contained in a voluminous brief submitted by nine of the textile associations. The Economic Adviser for the largest of these, Dr. Claudius T. Murchison, representing the American Cotton Manufacturers Institute, Inc., summarized the brief in an oral statement before the Committee. Dr. Murchison explained the highly competitive nature of the cotton goods industry, stressed the point that domestic production was more than adequate to meet domestic consumption and explained the sensitivity of the grey goods market.

With regard to the alleged "dollar gap," Dr. Murchison described this as a fallacy. "The dollar gap" said Dr. Murchison, " . . . is in no sense a concept of our obligations but is a result of our giving and is measured by the extent of our giving." He went on to explain that actually the "dollar gap" does not even exist and instead we have an export contribution of some five billions of dollars which really constitutes donations to Europe's recovery and rehabilitation program.

The witness explained the contributions already made by the cotton textile industry to the balancing of trade and stressed that the full impact of previous tariff cuts has not yet been felt. In like manner, the effect of the devaluation of foreign currency has not yet been fully felt. He explained what a further lowering of the tariff would mean to the approximately 1200 units included in this segment of American industry as well as to the 500,000 employees which work in mills.

First Round

The June 7 hearing was only the first round. Presumably recommendations of the Committee for Reciprocity Information will be given to the American experts who will meet with representatives of other nations at Torquay next month. The textile industry does not contend that all foreign goods should be kept out of America. It does contend, however, that American cotton good operatives with average hourly earnings of $1.13 cannot compete with Japanese cotton mill employees who earn 8.8 cents an hour including all fringe benefits such as dormitory quarters, etc.

In many American stores today there are on display children's cotton dresses which were made in Japan. These are dresses of modest quality, but there is a place for them in the American market, and each dress sold will displace American labor. These dresses are selling at the ridiculously low price of three for $1.00, and in order to compete with this price without lowering our living standard, it would be necessary for an American operative to take no longer than forty-five minutes to spin the yarn for all three dresses, weave the yarn into cloth, bleach and print it, cut it and sew it into garments, sew on buttons and transport it to the retail store.

No one in the State Department has as yet shown us how this can be done.

Sept. 7-8—Annual convention, **Southern Hosiery Manufacturers Association,** Hotel Roanoke, Roanoke, Va.

Sept. 11-13 — Joint meeting, **Southern Combed Yarn Spinners' Association** and **Spinner-Breeder Conference,** El Paso, Texas.

Sept. 15-16 — Second **Canadian Textile Seminar, Queen's University,** Kingston, Ont., Canada.

September 23 — **Southeastern Section, AATCC,** LaGrange, Ga.

Sept. 23—Meeting of Georgia Section, **American Society for Quality Control,** Georgia Institute of Technology, Atlanta, Ga.

September 28-29 — Annual meeting, **National Association of Cotton Manufacturers,** New Ocean House, Swampscott, Mass.

Sept. 28-30—Annual convention, **American Association of Textile Chemists and Colorists,** Wentworth-by-the-Sea, Portsmouth, N. H.

September 30—**Piedmont Division, STA,** Charlotte Hotel, Charlotte, N. C.

Oct. 2-7—**16th Southern Textile Exposition,** Textile Hall, Greenville, S. C.

Oct. 11-21—**International Exhibition of Knitting Machinery and Accessories,** Granby Halls, Leicester, England.

Oct. 12-13—Annual meeting, **North Carolina Cotton Manufacturers Association,** Carolina Hotel, Pinehurst, N. C.

October 16-21—**International Silk Congress,** New York City.

Oct. 21—Annual meeting, **Green Mountain Textile Overseers Association,** Hotel Berwick, Rutland, Vt.

Oct. 26-27—Annual Convention, **Carded Yarn Association,** Carolina Hotel, Pinehurst, N. C.

Oct. 28—Annual meeting, **Piedmont Section, AATCC,** Charlotte, N. C.

Nov. 16-17—Annual meeting, **Textile Research Institute,** Waldorf-Astoria Hotel, New York, N. Y.

Nov. 26-Dec. 1—**Annual meeting, Textile Division, American Society of Mechanical Engineers,** Hotel Statler, New York, N. Y.

Nov. 27-Dec. 2—**19th National Exposition of Power and Mechanical Engineering,** Grand Central Palace, New York City.

1951

Jan. 22-24—Annual meeting, **National Cotton Council,** Hotel Buena Vista, Biloxi, Miss.

April 28-May 20—**International Textile Exhibition,** Parc des Expositions, Lille (Nord), France.

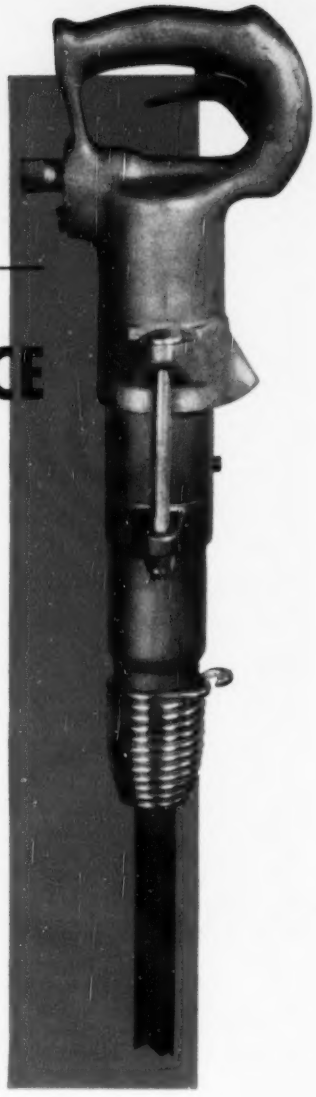
April 30—47th annual meeting, **National Association of Hosiery Manufacturers,** Claridge Hotel, Atlantic City, N. J.

April 30-May 1—**14th Hosiery Industry Conference,** Claridge Hotel, Atlantic City, N. J.

April 30-May 4—**Knitting Arts Exposition,** Atlantic City (N. J.) Auditorium.

April 30-May 4—**National Materials Handling Exposition,** International Amphitheater, Chicago, Ill.

A *new* MULTI-PURPOSE UTILITY DRILL



FOR PLANT MAINTENANCE

A time-saver and a cost-saver for every plant maintenance crew — the new Gardner-Denver S17 Utility Drill is a full-fledged, self-rotating pneumatic hammer drill that weighs only 19 pounds. It's ideal for placing anchor bolts, for running conduit, cable, pipe, and for many other jobs.

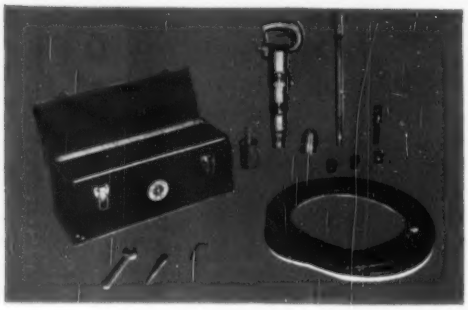
Does a man-sized job — The lightweight S17 does a full day's work — without tiring the operator — thanks to balanced weight and power.

Unusually versatile — Drills concrete, brick or stone — with standard drill steel (⅞" hex. x 3¼"). Takes standard star drills — with star drill adapter. Converts to chipping hammer or pick — special feature stops rotation.

Safe and easy to use — Convenient hand-form "D" handle. "Safety First" trigger throttle. Easy hole starting — on partial feed position.

Other big S17 features — Standard ⅞" hex. x 3¼" chuck. Trouble-free coil-spring-type steel retainer. Effective lubrication from integral oil chamber. Also available with blower attachment and standard plug drill chuck for dimension stone work.

UTILITY DRILL KIT — IN HANDY CARRYING CASE



Includes complete S17 Utility Drill and accessories: 14" drill steel—three rock bits, sizes 1⅞", 1⅝", 1⅜" — star drill adapter —chuck driver lock pin— drift key — Allen wrench —end wrench—oil can— and 25 feet of ½" air hose, with fittings.

Try the new Gardner-Denver Utility Drill today — you'll want one for every maintenance crew in your plant.

GARDNER-DENVER

Gardner-Denver Company, Quincy, Illinois.
In Canada: Gardner-Denver Company (Canada), Ltd., Toronto, Ontario.

Since 1859

Atlanta, Ga. Knoxville, Tenn. New York, N. Y. Pittsburgh, Pa.
Birmingham, Ala. Washington, D. C. Philadelphia, Pa. New Orleans, La.

SHORTS and REMNANTS

Days Gone By

". . . have been reading the many suggestions on nep count and causes of neps . . . enjoy reading the good things published each month . . . always glad to get my good old book [TI] . . . gives me much pleasure as I spent my lifetime in the mill and am now too old to do anything but just sit and read and think of the Old Gone By Days and the many problems now confronting the boss carders and spinners . . . "

J. F. LEHMAN
Paint Rock, Ala.

Flow Charts

"If we can obtain sheets showing the normal flow of production . . . educate salesmen [supplier] . . . engineers will be able to superimpose notations indicating best locations of their own equipment."

NAME WITHHELD

► We do not publish standard flow charts other than those included with articles to show deviation from normal procedure. A man in a wool mill is familiar with the flow of wool in his industry; a man in a cotton mill is familiar with the flow of cotton through a cotton mill, etc. Though such charts would prove interesting to people outside of the textile industry, and would be beneficial in the instance cited above, the mill man has very little need for this type of information and for that reason we have not published it.

50th Anniversary Issue Still Useful

"We have found the 50th Anniversary (July 1948) issue of TEXTILE INDUSTRIES extremely helpful, and especially the article in it on the knit underwear industry. We have used up our supply of these articles, and if you have any extra tear sheets available, I will be grateful if you will send me as many copies as you can spare."

ROY A. CHENEY
President
Underwear Institute
New York 16, N. Y.

Bleaching Book

"Will you please send us a catalog of textbooks covering the bleaching of cotton knit goods in kiers with hydrogen peroxide, and other bleaching and dyeing processes."

ELLIS M. SANTEE
Supt. Maintenance
Nazareth (Penna.) Mills, Inc.

Percentage Size

"We would like very much to have a reprint of the item 'Determining Per Cent Size Applied at the Slasher' which appeared in issue 99, No. 6, 97 (1935). Thank you very much."

E. T. FRAZIER
Engineering & Cost Dept.
Indianapolis (Ind.) Bleaching Co.

MEET "ROD"

TI's Philadelphia Representative for Advertising

Rodman Hanson, familiarly known as "Rod" by his many friends in advertising circles, has joined TEXTILE INDUSTRIES as advertising representative for the Philadelphia territory.

A graduate of the University of Pennsylvania, Rod comes from a family of advertising and publishing folks. He has had a number of years of experience including the newspaper, magazine, and industrial paper fields. TEXTILE INDUSTRIES is proud to introduce Rod to its host of friends.

Knock-Off Device

"Some time ago I saw described . . . a knock-off device for a roving frame which puts the same yardage on each doff. Do you have any knowledge of a device such as this?"

A. C. LINK
Manager
U. S. Rubber Co.
Hogansville, Ga.

► In TEXTILE INDUSTRIES, August, 1948, page 94.

Only Forty?

"My brother has advised me that your publication of August 1949 contains some remarkable photos on the cotton industry. I have therefore the honor to ask if you could send about forty of these photos."

NAME WITHHELD (Foreign)

► Another big order. We just do the best we can. Often photos which are supplied with an article must be returned.

Yarn Formula Book

". . . am interested in yarn and yarn numbers. How many yards to a pound, etc. Let me know the name of a book."

► "The Basic Yarn Formula," pocket-size, may be secured from Horace L. Pratt, P. O. Box 413, West Columbia, S. C. Price, fifty cents.

Fluff and More Fluff

". . . tests on looms . . . find that starched fluff is responsible for 17% of our end breaks . . . high speed warper responsible for fluff . . . observations draw us to the conclusion that air currents responsible. Toyed with the idea of installing suction fan above warper to draw the loose fluff out . . . whether readers of TEXTILE INDUSTRIES have had any experience in overcoming this problem?"

NAME WITHHELD

► Readers have had experience. See TI, June 1948, page 143.

Core Testing

"Kindly forward three reprints of the series 'Core Testing Wool' which appeared in the January issue of TEXTILE INDUSTRIES."

R. W. MURRAY
Research Division
Olson Rug Company
Chicago, Ill.

► Only a few copies left of 1500 reprints.

ONCE AGAIN MAY WE REMIND YOU?

16th Southern Textile Exposition
Greenville, S. C.
October 2-7

For complete information about the show, see the September issue of TEXTILE INDUSTRIES.

have you tried BECCO PEROXYGEN compounds?

...for

BLEACHING

DYE OXIDATION

Bleaching . . . and dye oxidation processes . . . are most efficient when you use BECCO Hydrogen Peroxide, the simplest source of active oxygen. The BECCO Continuous Hydrogen Peroxide Bleaching system avoids costly batch operation . . . enables you to use less chemical and less steam per pound of material, and get whiter, brighter goods quickly at low cost. BECCO Hydrogen Peroxide is readily adapted to most types of dye oxidation processes.

Other BECCO Peroxygen chemicals for specialized processes include Peracetic Acid 40% for bleaching alkali-sensitive fibers. Sodium Carbonate Peroxide and Sodium Pyrophosphate Peroxide are doubly useful as alkaline bleaching agents and detergents.

It will pay you to talk over your bleaching problems with a BECCO representative, a specialist in hydrogen peroxide bleaching and the treatment of textiles with peroxygen compounds.

BECCO SALES CORPORATION

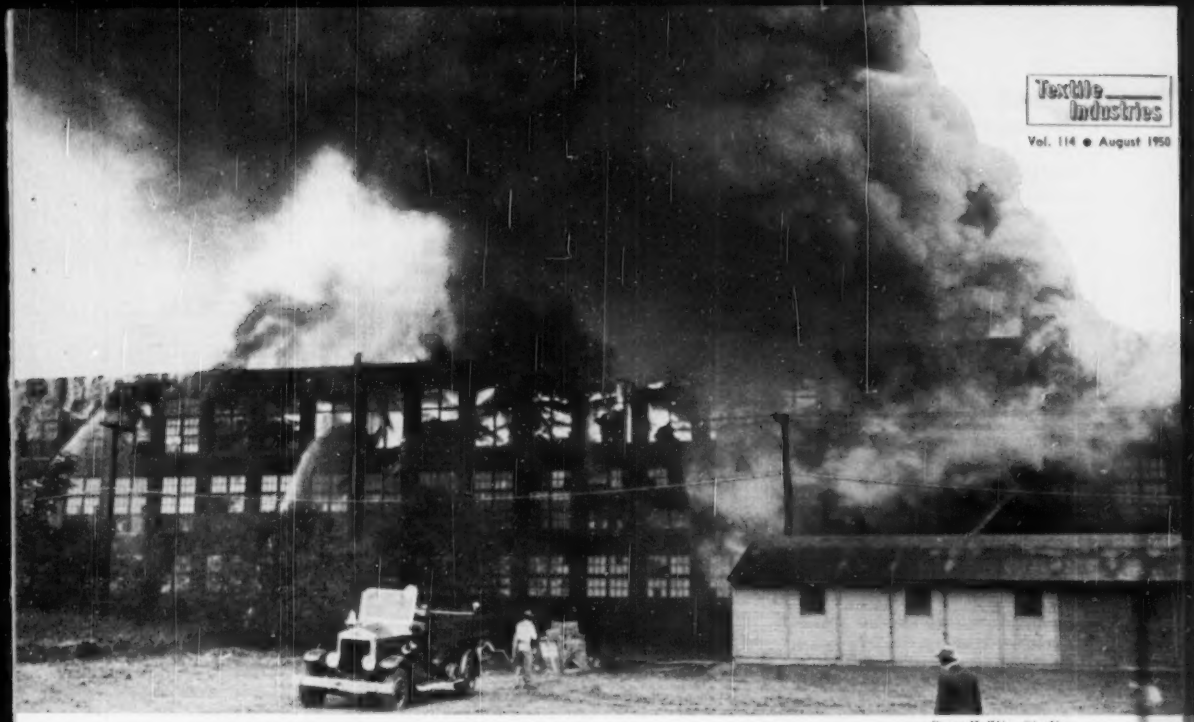
Sales Agent for BUFFALO ELECTRO-CHEMICAL COMPANY, INC.

Buffalo • Boston • Charlotte • Chicago
New York • Philadelphia

BUFFALO 7, N. Y.

T1-8-50

Textile Industries
Vol. 114 • August 1950



Russell Zito Studio

TOTAL DESTRUCTION BY FIRE came to this mill at a time when an inadequate amount of insurance was in force. In fact, the payment made by the insurance company was not even sufficient to cover indebtedness.

The Value of Appraisals

For Insurance Coverage and Proof of Loss

By W. C. NAUMANN
Textile Consultant and Appraiser*

WHEN PROPERTY is insured against loss by fire, the insurance* provides for the continuing use of the property or its equivalent. The replacement of any property destroyed must be done at current prices of materials and labor; therefore the estimate of the amount of insurance coverage should start with the reproductive cost. Obviously such an estimate should be revised from time to time as the prices of materials and labor change.

Standard Coverage. When fire insurance policies were first issued there were so many different kinds that even the average agent was confused. This confusion led to a demand for a standard coverage, and policies with uniform provisions were developed. Fire insurance policies are now issued on a standard form of policy which is made mandatory by the state in which the insured property is located.

The New York State standard policy is now being used in over forty different states. This standard form contains certain obligations on the part of the mutual parties and provides that if certain necessary facts and conditions are withheld or misrepresented the policy becomes void.

Riders. Special circumstances frequently require that a policy be altered so as to make the standard policy meet special or particular conditions. To do this it is usually necessary to add indorsements known as riders. These are evidences of changes or

* The purpose of fire insurance is to reimburse the insured for any loss of property values from fire, or from smoke and from water damage incidental to extinguishing fire.

* 92 Reid Ave., Passaic, N. J.

alterations attached to the policy, describing and recording the changes which are submitted to the insurance company for approval. To understand the coverage it is necessary to understand the riders.

Extended Coverage. For a small additional premium a property owner may get, along with fire insurance, protection covering such occurrences as windstorms, cyclones, tornadoes, hurricanes, hailstorms, riots, explosions, smoke, and damage from motor vehicles or falling aircraft. This is known as extended coverage and can cause the insurance companies large losses without adequate compensating premiums.

Originally, extended coverage carried the same rates as straight fire insurance. Under the pressure of competition the rates on this type of coverage were reduced repeatedly until, finally, the large companies or combinations of companies carrying industrial insurance issued extended coverage for as small a sum as $3.00 a year. At the time of the New England hurricane some twelve years ago, which resulted in large losses due to windstorm, both the associated mutual companies and the associated stock companies paid in windstorm losses well over three million dollars, on which neither of them had collected a thousand dollars yearly premium.

A fire insurance policy is a personal contract. It covers the owner's insurable interest in the property; not the property itself. No one can buy insurance on any property unless he has an insurable interest in it; that is, unless he should suffer a financial loss if the property were destroyed.

Extent of Liability. If a fire destroys property, the insurance company is liable to the owner only for the actual cash value of the property at the time the fire takes place. If $100,000 is carried on a plant and it is worth only $50,000, that is usually all you are paid, if it burns to the ground. In general the amount one can collect is based upon the replacement cost less depreciation. In other words, the purpose is to restore the insured as nearly as possible to what his situation was before the fire. As fire insurance companies compensate for loss based on actual cash value (replacement cost less depreciation) one may sometimes receive more than was paid to build and equip a plant.

The majority of fires do not cause complete losses. In the case of a partial loss it is necessary that the extent of repairs and the cost of making them be determined, or that the damaged building or equipment be repaired to the satisfaction of the owners. It is generally necessary to tear out or remove the material that has been damaged and replace it with new material. This may be more difficult than the settling of a total loss, because there is room for disagreement over both the extent of repairs and the cost of making them.

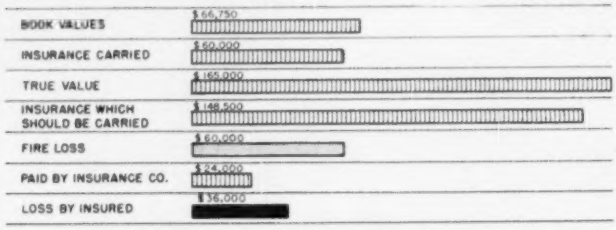
All this means that it is of the utmost importance that the actual existence of the property be verified and an adequate description be provided through an appraisal before the fire. The property should be listed to conform to the provisions of the insurance policy and riders. It is particularly important that all property be actually located by building and floor so that the proof of loss may be accurately established.

Adequate Coverage. Usually in placing insurance, not enough emphasis is put on securing adequate coverage. It takes a loss of large proportions in many cases to awaken the insured to the desirability of using something besides a guess on his insurable values and reveal the error of basing such values on book records. A loss is often an expensive education.

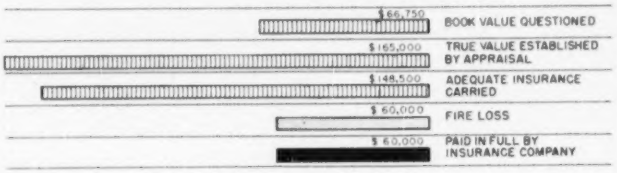
Insurable values are frequently found based upon book records. These book records have no value whatever for insurance because they are used as they appeared in the accounts without even an attempt to trend them. When one examines the various graphs com-

Determination of Actual Cash Value is Essential

Book values are seldom "actual cash values." Their use, therefore, is likely to lead to this result in the case of the presence of a 90% co-insurance clause:



The remedy is obviously an exact determination of the true (or actual cash) value of your property by means of Appraisal Service. With such an appraisal the situation becomes this:



You must settle in accordance with the stipulations of your contract. If you have failed to meet its obligations, you lose—and the only account to which you could charge your loss would be negligence—failure to appreciate the vital difference between *investment* and *value*.

piled on the constantly changing prices in buildings, machinery, and equipment, it is hard to believe that a hard-headed business man would follow such a course. Many building construction cost graphs starting at 100 in 1913 reached 300 in 1920, dropped to 150 in 1932 and are now well over the 300 mark again. Machinery and equipment changes follow suit but to greater extremes.

Based upon an estimate from private insurance appraisals, in 1948 the average industry was under-insured at least 40 per cent with regard to cash value for insurance purposes at that time. Possibly there has been some improvement in this situation since, due to the educational efforts of fire insurance companies, but the textile mills remain without adequate insurance.

Last year, one of the large insurance companies had 13 billion dollars outstanding in fire insurance, indicating an insurance inadequacy of approximately 5 billion dollars; that's a lot of money to risk losing in a fire!

It is too bad that the insurance buyer can not project himself into the future, work backwards from a theoretical loss, and find what has been done to insure recovery. Regardless of the methods of arriving at insurable values in textile plants, there are invariably certain kinds of property which are left out in the absence of a detailed appraisal.

Buildings and machinery cannot be ignored, but the general plant equipment comprising office and factory furniture and fixtures, trucks, scales, etc., as well as piping, wiring, transmission and other classes of property necessary to carry on the business are in too many instances forgotten or dismissed as not worth the premium expense of insuring them adequately.

Many textile concerns make no effort to properly insure the most vital assets of their business: drawings, patterns, designs and similar equipment; moreover they have not the slightest idea of their value from an insurance or any other standpoint. Repeatedly plants have been appraised where such special equipment conservatively valued from hundreds of thousands to a million dollars and over were not insured. The loss of such assets without adequate insurance coverage would put the concerns out of business permanently. In normal times, buildings and machinery can be replaced speedily and adequately, but the replacement of drawings, patterns, and designs takes much more time and effort, and the business may stop until they are replaced.

An Appraisal Service for Insurance Purposes:

1. **Determines the sound values on which insurance should be carried.**
2. **Furnishes the detailed classification of property facts on the basis of which a more specific rider form may be compiled.**
3. **Determines the value of the permissible exclusions.**
4. **Describes exclusions in detail so that they may be reconciled with the insurance rider forms.**
5. **Furnishes a distribution of values in order that the proper premium rate of insurance may be obtained.**
6. **Furnishes the allocation of insurable values so that specific co-insurance at a reduced premium may be safely used.**
7. **Makes immediately available proof of loss in case of fires.**

It is worthwhile to consider what the fire adjuster does at the time of a loss. Regardless of the size or complexity of the damaged property, he follows the same general procedure in adjusting all losses of the same class. When dealing with property that has not been destroyed or damaged too badly to be identified, the adjuster seeks to determine by means of an inventory, estimate, or statement (which he will check against the property itself), what its cash value was immediately preceding the fire, and what amount of loss or damage it has suffered.

When property has been totally destroyed or damaged beyond the possibility of identification, the adjuster determines the condition and value of the property before the fire. In the absence of an appraisal or adequate proof of loss, an examination of available records and taking the testimony of competent individuals may help to establish values. This procedure is based on the assumption that the records and witnesses were not destroyed in the fire.

Cash Value. Before noting the effectiveness of the various methods of establishing insurable values for coverage and proof of loss, we must consider the meaning of "cash value." Cash value, in the event of a loss, is defined as cost of reproduction less depreciation. The depreciation is based upon the observed condition in comparison with the new units of similar extent and character of the property. The factors of serviceable life and functional depreciation are not considered.

The most difficult question, and the most important one in the field of insurance appraisals, is how to arrive at the proper depreciation rate and the basis to be used in estimating the accrued depreciation to arrive at actual cash value.

Establishing Values. The establishment of values for insurance purposes is made in various ways and with varying degrees of accuracy with regards to both adequate coverage and proof of loss. The methods used may be divided into three groups.

The first group would include: the cubic foot and square foot methods of establishing building values or comparisons with similar new property; the trending of original costs by years of acquisition to get values on both buildings and machinery and equip-

ment; and finally, estimates of values by persons qualified to do this work. These persons may be engineers, architects, contractors, purchasing agents, insurance agents, or the owner of the property in question.

The second group would comprise those valuations or appraisals made in detail by the larger insurance companies and insurance associations, such as the Factory Mutuals and the Factory Insurance Association.

The third group would include appraisals by competent appraisal companies which endeavor to furnish complete insurance reports in accordance with the provisions of the policy and the riders on the policy.

Cubic foot and square foot units are largely used as a quick method to estimate the amount necessary for coverage. This method applies only to buildings and building fixtures, such as plumbing, heating, ventilating, lighting, sprinkler systems, and building elevators. No one has yet discovered any cubic foot or square foot method of arriving at a value for machinery and equipment. Insurable values of textile plants average about one-third for buildings and two-thirds for machinery and equipment, and the use of cube or square foot values gives an approximate solution to only part of the total insurable value involved.

This method depends on comparison with similar buildings on which cost or current values are available. Many books have been published giving complete breakdowns of a large number of typical buildings with methods of arriving at cube or square foot values for similar structures. At best, and giving careful consideration to all the variations appearing in any building compared with sample structures, it is possible to obtain only an approximation of the correct value. No proof of loss is possible under this method, and no basis is provided for the determination of partial loss values.

Because of the considerable number of graphs published by various authorities, there has been wide use of the method of trending costs to arrive at values. Probably the construction cost indexes and graphs of The American Appraisal Company are as well known as any. These indexes and graphs apply only to average construction and certain representative items of material and labor.

To get a good and fair answer to the question of values, a specific trend can apply to one building built at a given time in a specific location. Most properties just grow under varying cost circumstances and the original cost may not represent normal cost at all. A trend, which is of necessity an average, most likely may not apply to a specific structure at a specific location.

Qualified persons can make estimates of insurable value comparable to those arrived at by cube or square foot methods or by trends. A good contractor, architect, or engineer familiar with local conditions can estimate buildings with a degree of proficiency, and a mechanical engineer or plant superintendent can

". . . A loss is an expensive education . . ."

arrive at a reasonable value on machinery and equipment if the necessary time is devoted to it.

All three methods, however, give only an approximate estimate of the amount of coverage required and fail to provide a reliable proof of loss in case of fire.

The second group covers the valuations made by insurance companies as a guide to the amount of insurance to be carried, and in some cases these valuations serve as a proof of loss. The insurance company performing such service invariably offers this service with the provision that any values so developed are not binding on the insured or the insurance company, or companies involved in case of a loss, and do not have any relation to the amount of the loss at the time it occurs. In other words, the insurable value so arrived at is merely a guide to the amount of coverage required at the time the inspection was made and has no bearing whatever on the values if a loss occurs at some future date.

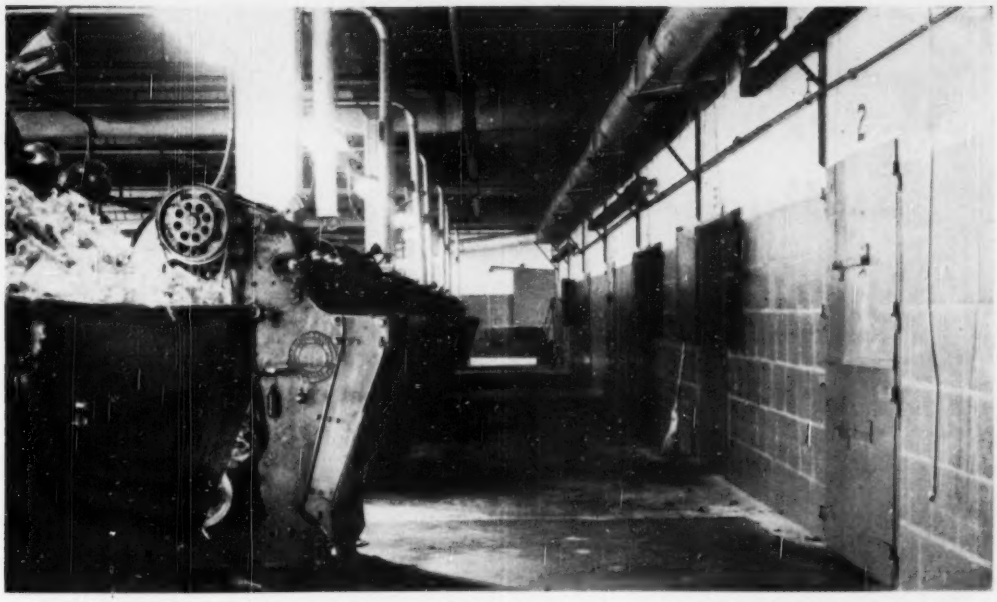
Probably the best known insurance appraisals are those made by the Factory Mutuals. These reports value buildings on a square foot basis. On machinery, a condensed schedule is furnished with the values based upon recent costs and a percentage added for freight, cartage, and installation. For various minor classifications such as shafting, belting, piping, wiring, furniture, and apparatus simply rough estimates are made based upon so much per lineal foot, horse-power of engines or motors, or per spindle in the textile mills.

Reports prepared by the Factory Insurance Association are somewhat more detailed but carry the final statement that the values are not binding on anyone concerned and could not be used as a basis for establishing values at any time in the future or when the loss occurs.

Appraisals. The best appraisal service for insurance purposes is provided by the detailed report of the appraisal companies or qualified appraisal engineers who compile their work to conform to the insurance policy and rider. Such a dependable service determines the sound values on which insurance should be carried, in addition to supplying helpful details for the records.

In addition to this, the appraisal companies periodically furnish revised insurable values in accordance with changes in property, fluctuations in replacement costs, and depreciations.

Without such reports the owner of property assumes responsibility for paying too much premium for insurance for inadequate or improper distribution of coverage, and loss through compromises by not having convincing proof of loss in the event of a fire. In comparison with the values involved, the hazard of their destruction by fire, and the cost of adjustment of the losses sustained, the cost of the best appraisal service is very little. It is an investment which provides the best means of realizing thorough insurance on the plant assets in case of a loss by fire.



CARDS AND BINS are fireproof at Brampton Woolen Company. Concrete block construction of storage bins adds to card room appearance. Flush panel radiators are also mounted on exterior of bins. A feature of the bins are steel Dutch doors which consist of two units horizontally divided so that the upper part may be opened while the lower part may remain closed to act as a barrier.

Brampton's Wool Storage Bins

EXCLUSIVE

Staff Prepared

WOOL STORAGE bins located in card rooms can be neat as well as functional. Newly constructed bins at the Brampton Woolen Company, Newport, New Hampshire, demonstrate the practicality of good housekeeping in the card room.

Eight bins, numbered to correspond with the woolen cards serviced, are lined along one wall of the mill building. Bins are airy and commodious, with enough space to store wool for 24 hours of card operation. Dormer screens near the ceiling of bins allow adequate lighting. Each bin is sprinkler equipped.

One of the unique features of the bins are Dutch doors which facilitate access no matter what level the stock is inside. The doors are ¼ inch plate steel. Both upper and lower sections are latched with cross bars. Since the installation, operators of the mill state that contamination of various stock caused by spilling from the bins onto card floors and mixing with adjacent stock has been eliminated.

CLEAN BIN INTERIORS. Glazed brick and smooth surfaced concrete blocks and cement floors allow easy cleaning.

A minimum of labor is required for cleaning bins. Smooth cement floors, glazed brick walls, and concrete block contribute to the ease with which card room men can manipulate vacuum hoses connected to an Abington stationary stripping system. Stock refuses to adhere to bin surfaces and exhaustion of the surplus or waste is quickly accomplished.

The problem of conveying stock from pickers to the bins has been effectively solved by a blower and conduit arrangement. Manually operated gates in the line are provided for at each bin. Ordinarily, every gate is open except that gate leading to the bin being replenished.

Materials Handling at Borden Mills

FILLING BOBBIN CONVEYOR highlights installation of mechanical materials handling facilities recently completed. Flow of goods and materials in all departments expedited in sustaining production and quality with negligible manual handling.

Staff Prepared

EXCLUSIVE

AN EXTENSIVE filling bobbin conveyor has been recently placed in operation at Borden Mills, Inc., Kingsport, Tenn. Formerly doffers doffed yarn into small boxes which were dumped into a larger box. The large box of bobbins was taken on an elevator to weave rooms where battery fillers had to load them manually onto their trucks.

The present system simply requires doffers to push full tubs of filling to the end of each spinning aisle and return with an empty. No lifting or stooping is involved. A panel board operator now observes lights on panels which indicate the supply of filling at each of eight unloading stations. Two lights (one red and one green) indicate which stations are full, part full, or empty; thereby signalling where filling is needed. Red light indicates a station is full; red and green light indicates a station can hold one more tub of filling; green light indicates station is empty and needs a supply of filling.

The controls for each station at the panel board include (left to right): reset button, start button, white light, green light, and red light (see photo of control panel). When a tub of filling is to be sent to one of the stations, the operator presses the start button for that station. This action turns on the white light and prepares the station for receiving a tub of filling. When the tub is delivered and another tub is to be sent to a different station, the reset button is pressed to turn the light off and remove the deflector which turned the first tub into the selected station. The sequence of operations is then repeated for the next tub. The conveyor was installed by the Logan Co., 206 Cabel St., Louisville, Ky.

A large switch selects the floor level (1st or 2nd floor weave room). Weaving is on 1st and 2nd floor; cloth room is on part of 1st floor; slashing is on 2nd; card room is on third; spinning on all of 4th.

The panel board operator observes lights, rolls tubs on small conveyor to elevator, then presses proper button which directs the filling to the selected location. When the tub arrives at the selected station, a deflector there directs the tub onto the siding.

A belt conveyor suspended near the ceiling transports full tubs to each station, and the same belt at

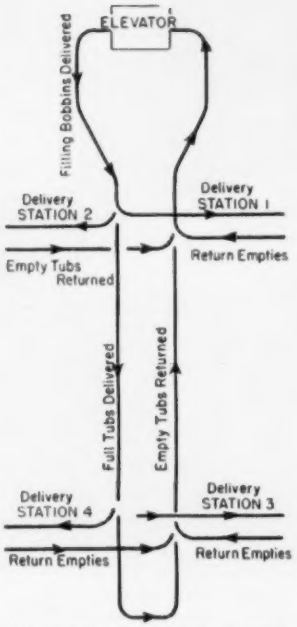
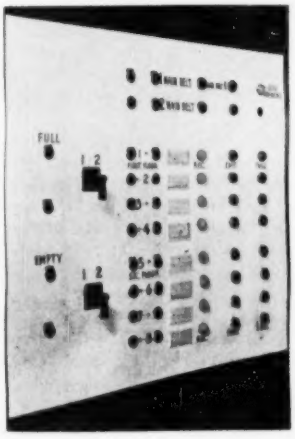
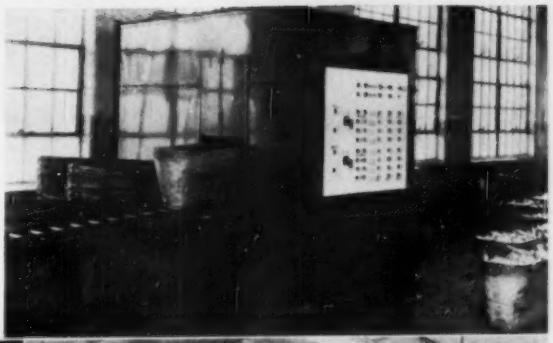


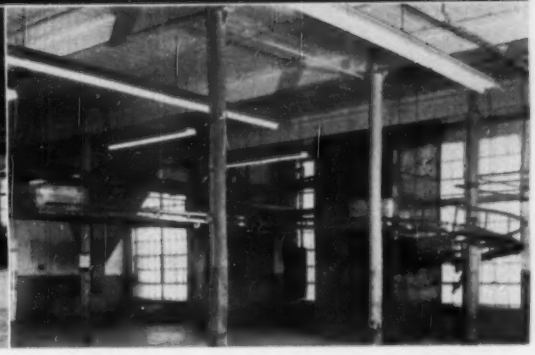
DIAGRAM OF BOBBIN CONVEYOR. Full tubs of bobbins leave elevator from left side and travel in direction indicated by arrows in diagram. At station 2 bobbins can be sidetracked or they may continue straight down the track to another station as set on the control panel. Line on left represents upper level or delivery line of the conveyor belt; whereas the line on right represents the lower level or return line which carries empty tubs from each station back to the elevator.



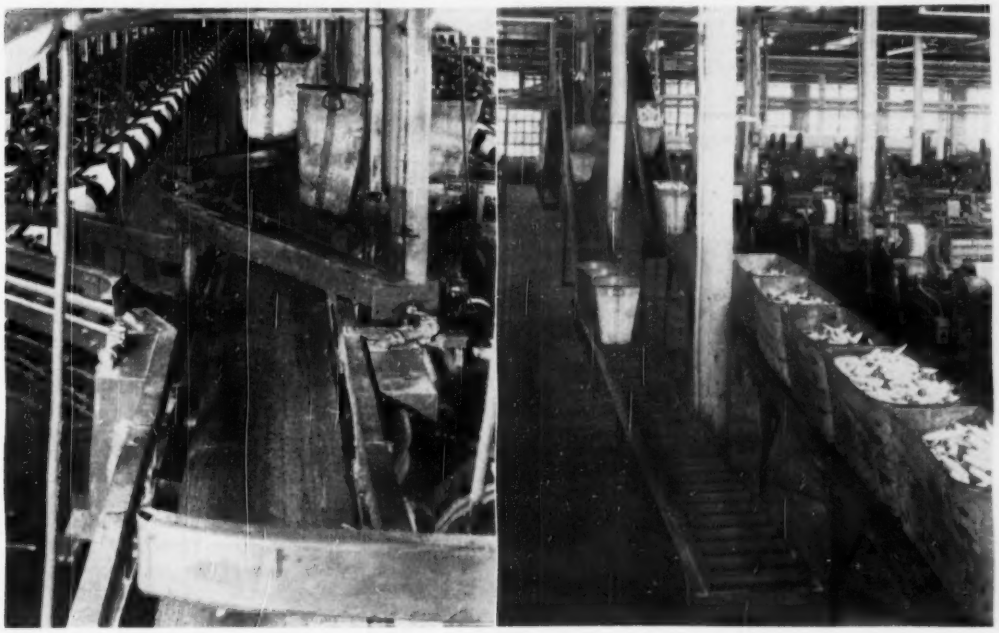
CENTRAL CONTROL PANEL. Arrangement of signal lights and switches may be seen in this close-up photo.

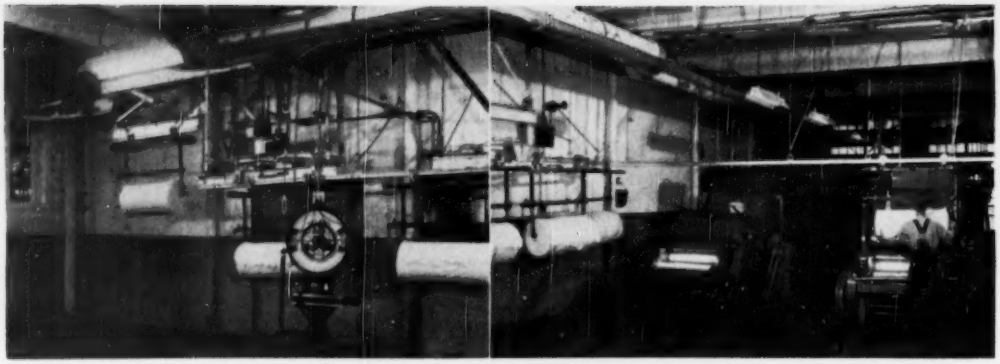
IN SPINNING ROOM on fourth floor tubs of filling are loaded into elevator from right side as shown in photo at right. Tub emerging at left is an empty returned from a weave room below. Note control panel mounted on elevator housing. In lower right photo may be seen the elevator shaft (extreme right) in the second floor weave room. Full tubs of filling may be observed emerging from the elevator shaft while empty tubs are entering for return to the spinning room. Lower left photo shows conveyor lines and unloading stations in weave room. Upper conveyor carries full tubs of filling; lower line returns empties. On each floor level the upper and lower lines utilize a single continuous belt.



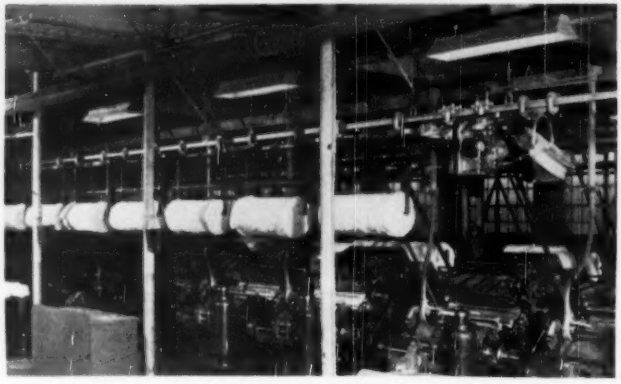


UNLOADING STATIONS. Left, second floor weave room, showing one tub of filling being diverted to one of the unloading stations. Another tub of filling (far center) continues down the conveyor to another station which has been selected at the control panel on the fourth floor. Note the deflectors which direct the tubs to each station. Right, second floor weave room, showing full tubs of filling being sidetracked by the conveyor mechanism. Empty tubs are being transported by the conveyor back to the fourth floor spinning room where they are refilled. Separate motors are used for each belt returning tubs and delivering them at each sidetrack.

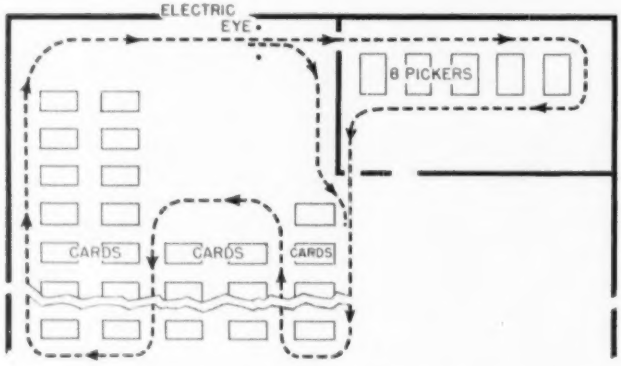




LAP CARRIER MOVES BY GRAVITY (right) from picker to the automatic scales. Left, automatic scales weigh the lap, rejecting any lap that is out of tolerance. Carriers are then raised by pneumatic hoist to transport level.



PUSHER MOTOR pushes a group of loaded carriers down the main line. Note the ceiling cleaner fan mounted on the pusher motor. 234 cards are serviced by the monorail system in this mill.



LAP CONVEYOR ARRANGEMENT is shown in this flow diagram.

a lower level returns empties. Galvanized metal tubs are used to transport filling on the conveyor.

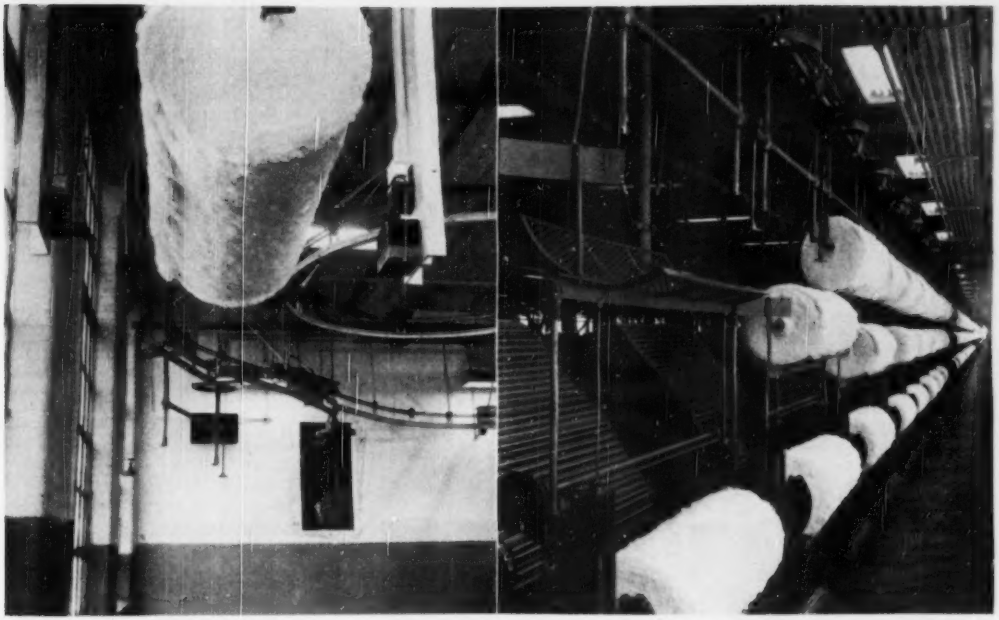
Lap Conveyor. Before a modern lap conveyor system was installed, one man on each shift hauled laps on a truck to each card and placed them on the card rack.

Recently completed, an overhead monorail installation in the picker room and card room handles all laps automatically after the picker tender removes them from the picker. Laps move by gravity on an inclined overhead rail from the pickers to weighing scales which automatically weigh each lap. If a lap is heavier than standard weight, a red light flashes, and a horn blows. The picker tender then presses a button which sidetracks the lap after he observes which picker the lap came from. In this way, the tender can adjust the picker to correct weight of lap before many bad laps are made.

The horn sounds and a yellow light flashes when a lap is lighter than standard tolerances permit. A green light indicates lap is within tolerance; a blue light indicates that lap is within tolerance but near borderline on heavy side. A white light shows lap is within tolerance but borderline on light side.

The weighing scale automatically prints a record which is kept of every lap processed. There are eight one-process pickers and 234 cards serviced by the monorail system in this mill.

After being raised automatically from scales to an elevated position, satisfactory laps move by gravity into card room about 75 feet to a point where the track is level. Four pushers (electric motor powered and equipped with ceiling fans) keep the laps moving around the card room until they are dropped automatically on card racks.



ELECTRIC EYE CONTROL. Left, when the carriers have made a complete circuit of the track the empty carriers are switched back into the picker room by an electric eye, and the carriers still carrying laps are returned to main line for another circuit. Right, when a receiver is up, a lever on the carrier is tripped, dropping a lap on the receiver which then settles below the level of the following laps.

A mechanical switch, or selector, is actuated to drop each lap as it passes over an empty card rack, and a limit switch controls the pushers to regulate their interval of travel. An electric eye switch at one end of the card room allows empty racks to return to the picker room, but a full rack actuates a switch which changes the track to permit the lap to continue around the card room again.

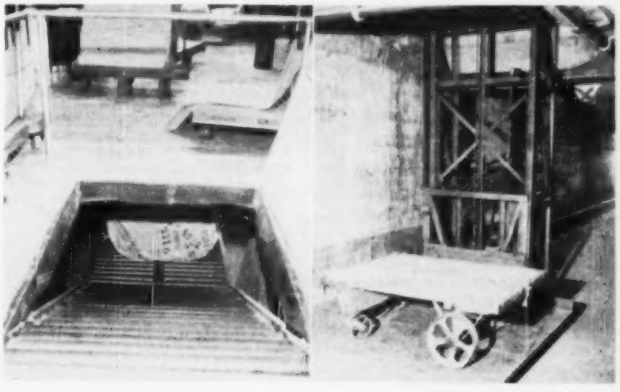
This system is largely of local design; however, rails and pushers were supplied by American Mono-Rail Co.

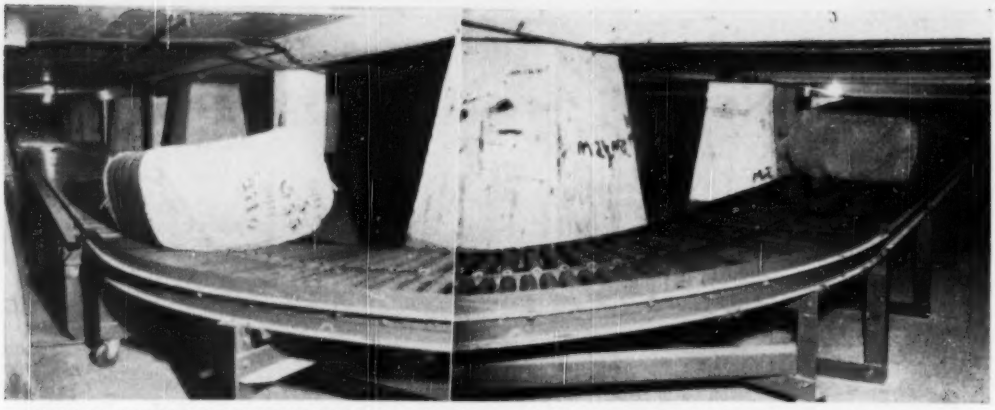
Cloth Conveyor. Formerly cloth was stored in the basement by rolling it down a chute. An elevator was used to raise one bale of cloth at a time when loading trucks to ship cloth. Bales to be shipped by rail had to be hauled to the railroad tracks by electric powered tractor trucks.

The roll conveyor chute was extended by adding a wood slat belt-type conveyor which carries bales out of the basement and up and across a street; thence into a warehouse adjoining a loading dock. The bales can be directed into a box car when one is available at the siding.

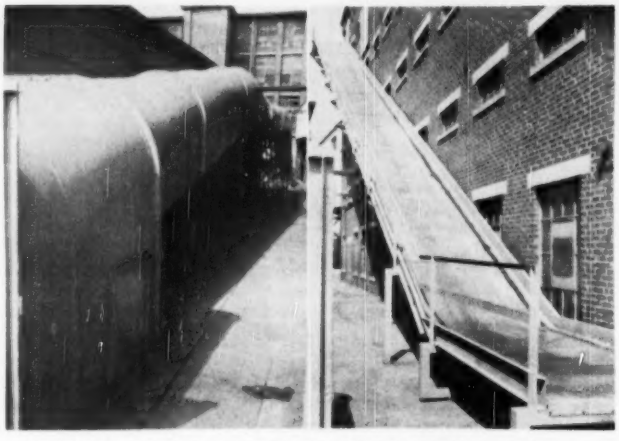
The conveyor was designed to permit unloading starch from box cars and storing it in the basement, and this can be done by reversing the direction of travel of the belt. A deflector in the enclosed chute near the warehouse directs the cloth into the warehouse. Actuating a push button switch opens the deflector and permits the conveyor to deliver the cloth directly into the box car. This conveyor was installed by

INCLINED ROLLER CHUTE (left) at the bale press where baled cloth starts its journey to the warehouse or loading dock. Right, power lift formerly used to raise one bale of cloth at a time to be loaded on trucks at ground level.





BALE CONVEYOR AT BASEMENT LEVEL, showing wood slat conveyor at left rear. The wood slat section carries the cloth bales upward and out of the basement, over a span above ground level and into the warehouse or loading dock.



OUTSIDE PORTION OF CLOTH BALE CONVEYOR (left) serves equally well in all kinds of weather and extends overhead from the basement under the cloth room to the warehouse and loading dock. A deflector in this portion of the enclosure directs the cloth into a box car at the loading dock or into the warehouse according to current needs.

the Logan Company.

Waste Bale Ramp. Before improving the handling facilities, an elevator was used to transport bales of waste from the fifth floor to the ground floor and then by hand truck to a box car, one bale at a time. A ramp was erected to the waste floor level, and now the bales of waste are pushed onto the ramp where they slide down five stories and into the railroad car. 225 to 250 bales of waste per month are handled in this way.

The waste ramp is entirely of local design and was installed by the local maintenance crew.

W. J. Still, vice-president, stated that the materials handling systems were studied carefully before the installations were made, and more economical operations have resulted.

Make Plans Now to Attend the Greenville Show

Two hundred and thirty one exhibitors will display machinery, equipment, accessories, supplies, primary and fabricating materials and parts at the 16th Southern Textile Exposition to be held in Greenville, S. C., Oct. 2-7. Many types of standard and new and improved equipment and methods will be shown and demonstrated. Manufacturers of textile goods from all over the United States and some foreign countries are expected to attend. Special attention is being given to the housing of the thousands of visitors.

Hotels, apartments and guest homes in the Piedmont section have been requested to give every available room to visitors. The private homes in Greenville and vicinity are also asked to assist in taking care of visitors.

Persons desiring accommodations are requested to write to the Secretary, Rooms Committee, Textile Hall, P. O. Box 1323, Greenville, S. C.

For a preview of the show, see the September issue of TEXTILE INDUSTRIES. A list of exhibitors, their booth numbers, representatives to be in attendance at the booths, and products to be displayed will be published.

Infra - Red Drying

Increases Finishing Plant Production

Staff Prepared

Cloth speeds increased 10 to 15 ypm through use of supplementary infra-red dryers. Pre-heat removes 10% moisture from dyed goods.

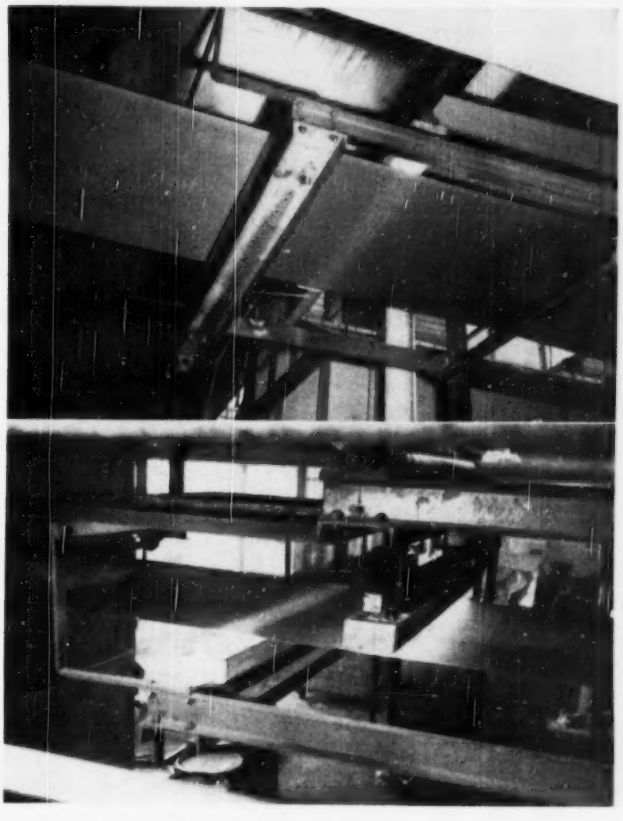
EXCLUSIVE

TWO INFRA-RED dryer units installed in front of an oven-type dryer have permitted an increase in production through the dryers at Riegel Textile Corporation, Trion, Ga. The two burners, one mounted on each side of the cloth, remove approximately 10% of the moisture from the cloth before it enters the drying oven. Riegel had been running a heavy weight style of cloth at 60 ypm, and the auxiliary burners made possible the present 70-75 ypm speeds; an increase of 10-15 ypm.

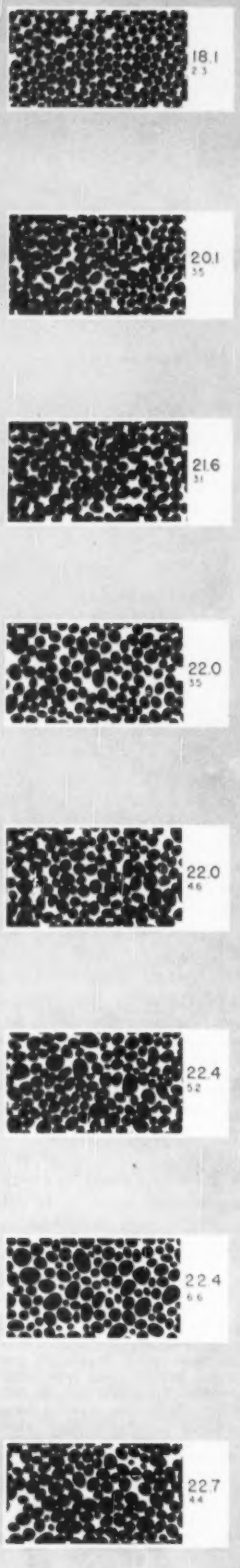
The cloth now leaves the dryers in a more nearly bone dry condition than it did before the supplementary burners were installed.

Fuel. At present, the auxiliary dryers are operated on Propane gas at a cost of approximately $1.20 per hour for both burners. There has been no trouble or maintenance on the burners during six months of operation. The infra-red units at Riegel are 49" wide, and they are mounted about four feet from the entrance to the oven type dryer. This arrangement prevents the cloth from cooling before it enters the oven. In operation, the auxiliary units preheat the cloth before it enters the oven dryer, thereby permitting increased production speeds by permitting more efficiency in the drying oven which operates on a reduced load.

A switch is provided to control the burners manually or to stop the burners at any time the dye range stops.



Top, cloth travels at 70 to 75 ypm between two auxiliary dryers mounted overhead and about four feet from the entrance to the oven type dryer. Bottom, note moisture rising from cloth before it enters drying oven. The infra-red dryers remove about 10% of the moisture from the cloth leaving the dye range.



Film Strip Facilitates

Rapid Estimation of

A RAPID method has been developed for estimating mean diameter and uniformity in wool or wool top by using cross sections of fibers photographed onto a 35-mm. film strip.

Large numbers of fibers may be viewed and fiber contours determined very rapidly. The use of this method for checking blends of wool for manufacturing purposes should be advantageous.

This method also is suggested for use in conjunction with the Micronaire instrument for estimating uniformity of fineness.

Fineness and uniformity as determined by this rapid method are of use to wool producers in their production programs.

FINENESS and uniformity are of fundamental and basic importance in determining the grade and value of wool and wool top, as well as in determining the use to be made of specific lots and the most suitable blending and processing techniques. At best, the task of measuring fineness and fineness uniformity is a slow and painstaking operation, and any new procedure which reduces the time and effort involved will be of material aid to processors of wool and also to growers who want a rapid determination of the grade in their wool clip.

Several methods and techniques for measuring wool fineness have been developed and are in current use, the most common of which are the long-fiber, the short-fiber and the cross section methods. All are quite exacting and require considerable time and patience. Where only a practical working accuracy is sufficient, these methods are too slow and exacting, and a speedier technique is desirable.

Prior to the war, the problem of fineness and uniformity in fleeces of wool was studied in connection with animal breeding programs, and a film strip of known expressions of various grades was developed (1). This film strip was recognized as being of potential importance also in analyzing a large number of samples of wool top as well as of wool.

In this article information is presented regarding the development and use of a film strip of known expressions for the rapid determination of fineness and uniformity in wool and wool top where a working accuracy (rather than precise calculations) is sufficient.

◄**SIMULATED FILM STRIPS** on these two pages depict wool fibers in cross section (areas representing fibers have been printed in black, rather than white as they appear on film, for sake of clarity). Note mean diameter and variabiilty numbers at right of each cross section. Reading from top to bottom on each strip the difference in fiber diameter or fineness for the 13 grades can be observed (cross section with mean diameter of 36.7 and standard deviation of 6.8 is omitted). The range and possible variability within one grade are demonstrated by cross sections 3, 4, 5, 6, and 7 on this page. All 13 grades are so illustrated on the film strip (see Table 1) which is now available from the Department of Agriculture.

How Film Strip Was Prepared. Expressions on the 35-mm. film strip were made from actual photomicrographs of fibers in cross section, magnified 500 diameters. The mean diameter of each expression was determined by measuring all fibers appearing within the area on each photomicrograph. Measurements were made on fibers around the edge of the photomicrograph, whose surfaces were fifty per cent or more inside the area, and these measurements were included in calculating the average for the entire area.

This should be kept in mind

Wool Fiber Fineness

By **ELROY M. POHLE***
U. S. Department of Agriculture

when using the film strip because it increases the number of fibers visible when making comparisons by use of the film.

By use of photographic processes a duplicate negative film has been made so that the fibers appear white, as do those from the microprojector.

The expressions on the film strip consist of five examples for mean diameter and uniformity for each of 13 grades of wool top, or a total of 65 examples, ranging from 18.1 to 41.2 microns for the mean diameter. The varying degrees of uniformity are expressed on the film by standard deviation in microns, which range from 2.3 to 12.6. Any one who prefers to use coefficient of variability, in percentages, can divide the standard deviation by the mean diameter and multiply by 100. The expressions have been arranged in sequence for maximum convenience in determination of fineness and variability.

The mean diameter and standard deviation data for all expressions appearing on the film strip are listed in Table I. The coefficient of variability also is included in this tabulation but does not appear on the film strip.

Equipment Required. It is necessary to have certain equipment in order to use the rapid comparator method. First is a device for making cross sections of fibers (6), the best known of which is the Hardy (7) cross section device. The necessary steps in preparing cross sections by use of this device are illustrated in U.S.D.A. Circular No. 704 (2).

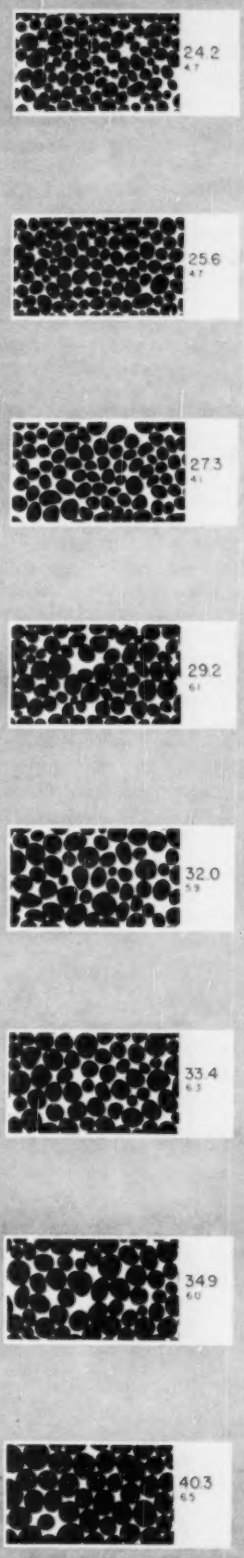
Second is any good make of 35-mm. projector adaptable for use in projecting the film of known expressions. Third is a vertical or horizontal type of microprojector, which is provided with objectives to give a 500-diameter magnification for projecting the sample of unknown diameter and uniformity. However, the vertical-type projector is believed to have greater adaptability for most projection purposes, since it may be mounted either vertically or horizontally, and it has an advantage, especially when using aquaform mounting media.

The projection equipment is illustrated in Fig. 1.

How Film Strip is Used. Calibrate the film strip projector for 500 diameters by use of a centimeter ruler and the scale on the film. The scale is arranged so that 2.5 centimeters will give a 500-diameter magnification.

The 35-mm. projector should be mounted near enough to the microprojector so that the images from each appear side by side (see Fig. 1-C).

After preparing and placing a cross section slide on the microprojector stage, turn the film in the 35-mm. projector until an expression is found that most nearly matches with the unknown for



*Marketing Specialist, Wool Division, Livestock Branch, Production and Marketing Administration.

Acknowledgment: The author wishes to express his appreciation to Mayne R. Coe, Jr., former employee of the U. S. Department of Agriculture, who prepared and measured the majority of the original photomicrographs, and to Donald D. Johnston and H. Dean Ray, of the Livestock Branch, who also measured and checked these photographs for their completeness.

TABLE I

Mean Diameter and Standard Deviation Data for All Expressions on Comparator Film Strip

Grade	Micron Range	Mean Diameter (microns)	Standard Deviation (microns)	Coefficient of Variability %
80's	18.1-19.5	18.1	2.3	12.7
		18.3	3.2	17.5
		18.7	3.8	20.3
		19.1	4.0	20.9
		19.5	4.7	24.1
70's	19.6-21.0	20.1	3.5	17.4
		20.0	4.2	21.0
		20.8	4.6	22.1
		20.1	4.9	24.4
		20.8	5.3	25.5
64's	21.1-22.5	21.6	3.1	14.4
		22.0	3.5	15.9
		22.0	4.6	20.9
		22.4	5.2	23.2
		22.4	6.6	29.5
62's	22.6-24.0	22.7	4.4	19.4
		23.0	5.1	22.2
		23.1	5.4	23.4
		22.8	6.2	27.2
		23.7	6.8	28.7
60's	24.1-25.5	24.2	4.7	19.4
		25.4	5.2	20.5
		24.3	5.6	23.0
		24.8	6.4	25.8
		25.5	7.8	30.6
58's	25.6-27.0	25.6	4.7	18.4
		26.0	5.5	21.2
		26.9	6.0	22.3
		26.9	6.7	24.9
		26.9	7.9	29.4
56's	27.1-29.0	27.3	4.1	15.0
		28.0	5.7	20.4
		28.1	6.5	23.1
		27.6	7.4	26.8
		28.9	8.5	29.4
50's	29.1-31.5	29.2	6.1	20.9
		30.0	6.1	20.3
		30.8	7.1	23.1
		30.2	8.4	27.8
		31.0	8.9	28.7
48's	31.6-33.2	32.0	5.9	18.4
		32.1	7.0	21.8
		32.2	7.7	23.9
		32.5	8.8	27.1
		33.2	9.7	29.2
46's	33.3-34.7	33.4	6.3	18.9
		34.0	7.3	21.5
		34.3	8.5	24.8
		34.5	9.1	26.4
		34.5	11.5	33.3
44's	34.8-36.5	34.9	6.0	17.2
		35.3	7.6	21.5
		35.4	8.5	24.0
		35.2	9.3	26.4
		36.5	10.0	27.4
40's	36.6-38.7	36.7	6.8	18.5
		37.1	7.7	20.8
		38.1	8.9	23.4
		38.2	9.8	25.7
		38.4	12.2	31.8
36's	38.8-41.3	38.9	5.3	13.6
		40.3	6.5	16.1
		40.5	9.8	24.2
		41.2	11.2	27.2
		41.0	12.6	30.7

mean diameter and variability. This should be done as speedily as possible, because long deliberation tends to result in perplexity.

When a satisfactory matching for fineness and variability has been made, the results should be recorded, the slide moved to a new location, another estimate made, and the same procedure followed until the necessary number of areas and slides have been examined. The results of all slides and areas may then be summarized.

It has been found advantageous to have the brightness of the images of the fibers on the receiving screen, from both the known and unknown, of approximately the same intensity. The light from the 35-mm. projector generally is more intense than that from the microprojector, but this can be remedied by the use of a Powerstat. Filters also have been used with success.

As operators become more proficient in differentiating between the known and unknown for diameter or uniformity, and the expressions on the film strip may not be quite as fine or coarse, or as uniform or variable as the unknown sample, a plus or minus may be used in estimating. This may be solved by making a calculation to equalize the difference between the two expressions on the film strip.

As an example: The film strip has expressions for mean diameter and variability of 20.0-4.2 and 20.8-4.6, respectively. If the unknown appears to fall between the two expressions for diameter but 4.6 is nearest for uniformity, then perhaps a 20.8- (minus) with a standard deviation of 4.6 would be in order. This would give a reading of 20.4 and 4.6.

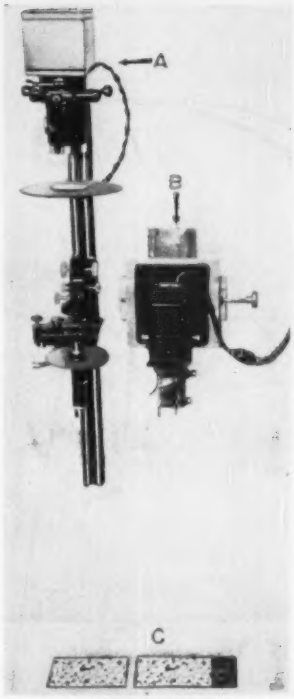
Working Accuracy Demonstrated. The official measurement method and grade requirements prescribed by the United States Department of Agriculture (4) and the American Society for Testing Materials (3) require that variability be expressed in terms of fiber distribution. With this in mind, it should be remembered that results obtained by the comparator method may not always be as accurate as those obtained by the

more time-consuming measurement methods. However, a practical and working accuracy previously has been demonstrated for greasy (cleansed) wool and the same is believed possible for wool top.

Results of tests on wool samples (1), showing both the rapid comparator estimate and the calculated fineness results, gave highly significant correlation coefficients, ranging from 0.77 to 0.94 for wools varying in grade from 80's to 56's. On the same samples, the estimated and calculated variability showed highly significant correlation coefficients, ranging from 0.74 to 0.92. The greatest difference found between the calculated and estimated fineness and variability was 0.6 and 0.4 microns, respectively.

Further results on the application of the comparator method with measured fineness and variability are presented in USDA Circular 704 (2). The accuracy of the estimates was reported to be equivalent to that of measuring approximately 62 fibers.

Technique Versatile. Application of the cross section technique employed in the rapid comparator method gives the advantage of viewing, very quickly, large numbers of fibers from the unknown sample. Moreover, this technique shows fiber contour, such as the ovality or ellipticity of the fibers, which has been suggested as being of considerable importance in determining the spinnability and quality or evenness of yarn.



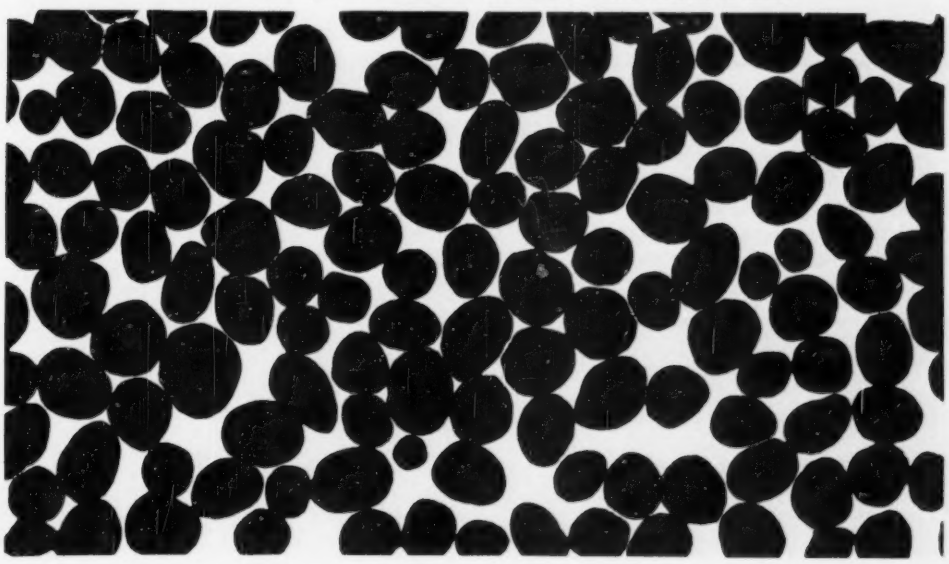
(Fig. 1): EQUIPMENT. Set-up for estimating fiber fineness and uniformity by the rapid comparator method: A, vertical type of microprojector; B, 35-mm. film strip projector mounted on adjustable metal plate; C, receiving screen showing projected images.

After mean diameter and uniformity estimates have been made from the unknown cross-sections, photomicrographs may be made with slight effort and these may be useful for permanent record purposes. These photographs should serve equally well for making up and matching previous blends for delivery and sales purposes. Moreover, the photomicrographs have been found to be a practical way of presenting scientific results to those unaccustomed to technological methods.

The rapid comparator method should prove valuable when used in conjunction with the Micronaire instrument for estimating fineness. It not only provides confirmation of Micronaire results for fineness but it also gives an estimate of uniformity. Wool producers can use fineness and uniformity results obtained by this speedy method in their production programs.

While an estimated figure is not recognized as being absolute, much time is saved by the short-cut

CROSS SECTION OF 64's WOOL, magnified 500 times for comparison purposes. Mean diameter, 21.6 microns; standard deviation, 3.1. Fibers are shown here in black for the sake of clarity.



method where a practical working accuracy is satisfactory. Much of the accuracy of the estimating method discussed here depends, of course, both upon the skill of the operator and upon checking with known measured samples. Increased accuracy of the rapid comparator method may be attained, however, by making several cross-section slides, estimating several areas from each slide, and averaging the independent estimates for each sample.

The accompanying Table 2 presents suggested maximum calculated standard deviations, based upon the fineness range for each grade of wool top, as a means of expressing the degree of fiber uniformity in a sample (5):

Experience has shown that when the coefficient of variability approaches or exceeds 25% the sample generally is substandard for the grade.

TABLE 2

Grade	Standard Deviation Maximum (Microns)
80's	4.4
70's	5.0
64's	5.5
62's	6.0
60's	6.4
58's	6.9
56's	7.4
50's	8.1
48's	8.5
46's	8.8
44's	9.2
40's	9.7
36's	10.2

Availability of Comparator Film Strip. A copy of the comparator film strip may be obtained from the Livestock Branch, PMA, United States Department of Agriculture, Washington 25, D. C.

LITERATURE CITED

1. Pohle, Elroy M., The Application of a Rapid Comparator Method for Determining Fineness and Variability in Wool. Proceedings American Society Animal Production, pp. 161-168, illustrated (1949).
2. Pohle, Elroy M., Hazel, L. N., and Keller, H. R., Sampling and Measuring Methods for Determining Fineness and Uniformity in Wool, U. S. Department of Agriculture Circular 704, 14 pp., illustrated (1944 & 1947).
3. American Society for Testing Materials, Standards, "Standard Specifications and Methods of Test for Fineness of Wool Tops," D 472-41, 255-61 (Oct. 1942).
4. U. S. Department of Agriculture, Amendment No. 1 to S.R.A. 135, 1-5, 8 (Dec. 1939).
5. Wadley, F. M., Pohle, E. M., and Mueller, W. A. Easier Grade Determination by Measurement in Wool Top, Textile Research Journal, Vol. XIX, No. 5, pp. 278-282 (1949).
6. de LaRue, A. M. Hardy Cross Section Devices, 3406 Lancer Drive, Hyattsville, Maryland. Manufacturer of special laboratory equipment (Mimeo.).
7. Hardy, J. I. Determination of fiber fineness and cross-sectional variability; an improved technique for obtaining photomicrographs by projecting cross-sections on sensitized paper, Journal Textile Research 5: pp. 184-190, illustrated (1935).

Instrument Maintenance Course Dates Announced

Brown Instruments division of Minneapolis-Honeywell Regulator Company will open its second half of 1950 maintenance and repair courses on August 14.

"The courses will again be fitted to the specific requirements of customers who will send employees to the Brown School," said M. J. Ladden, chief instructor. "Classes will be held on a three, five and 13 weeks basis. The shorter courses will be for concentrated product instruction, the longer courses for more comprehensive training in complete industrial instrumentation."

The three-week course will start on August 14 and run to September 1. The five-week classes start September 11 and October 30. The comprehensive 13-week course, will be held from September 11 to December 8.

All classes will be conducted at the company school in Philadelphia, Mr. Ladden said.

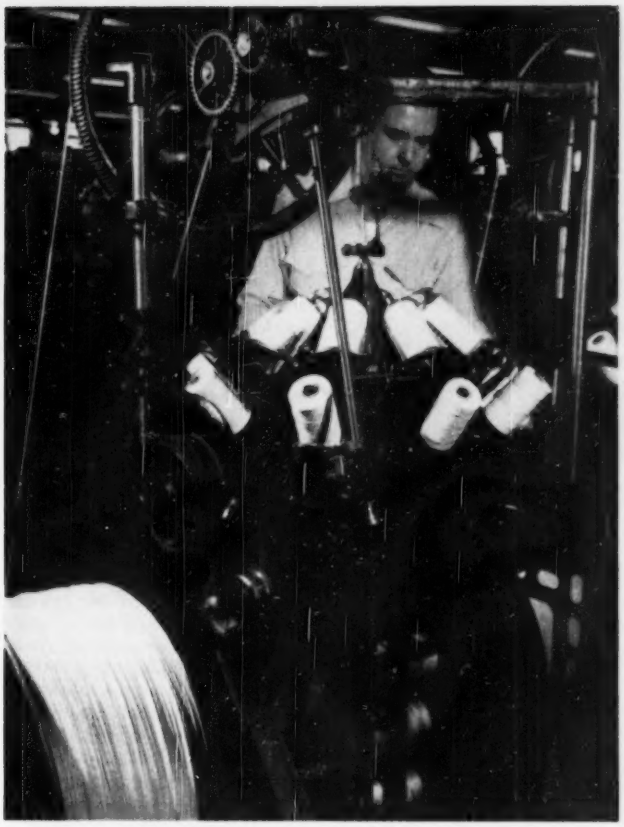
International Cotton Advisory Committee Tours Southern Research Lab.

Members of the International Cotton Advisory Committee completed a two week tour of the United States with a visit to the Southern Regional Research Laboratory in New Orleans. The group (shown in photo) at the laboratory observed fundamental studies on cotton fibers, including microscopical measurements to determine the swelling of wet fibers; textile testing operations; and current investigations to improve the chemical and mechanical processing of cotton. A new draft guide and a new loom attachment for weaving dense fabrics were shown.

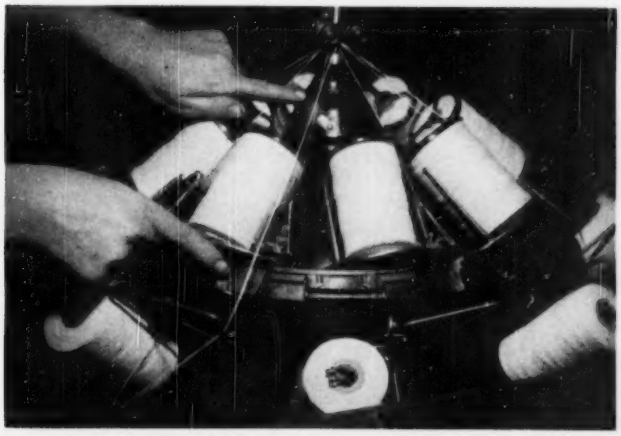
Braider Operation

Proper Tensions and Lubrication Are "Musts"

Staff Interview



FAULTY YARN PACKAGES on the braider may complicate efforts to maintain correct and uniform tension. Care must be exercised to appiy the same tension on each end when winding packages with more than one end, and although ends may be closely laid, they must not be crowded. Weight of the yarn package should not exceed 8 ounces if the package is to be used on a 16-carrier braider such as the one shown here.

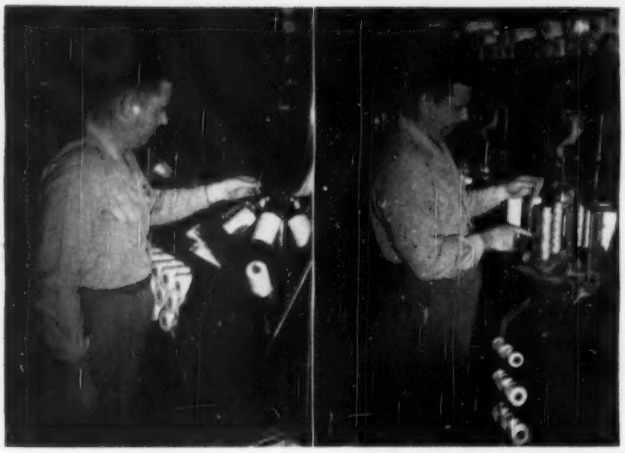


TWO PRIMARY POINTS OF LUBRICATION that must not be overlooked are the hole in top of beater stand and the upper carrier. All bearings and oil holes should be lubricated every 40 hours.

IN OPERATING braiding machines on cotton and rayon cord materials, tension is of primary importance in attaining a smoothly braided cord of good quality. Good lubrication is essential in maintaining both quality and a high rate of production.

Tensions. There are two tensions on Wardwell braiders which require careful attention and must be kept adjusted properly. These are the tension adjuster or assembly on the upper carrier, and the tension adjuster on the lower carrier. When the tension is adjusted on the upper carrier, spring tension on the upper supply ratchet is affected, and the yarn delivered from each of these carriers must be the same to attain an evenly braided cord.

A tension tester (shown in illustration) should be used instead of relying on the notch settings on the spring tension quadrant. On flat bed braiders, such as New England Butt braiders, care must be taken to be sure lint or foreign matter does not drag on the yarn because there is no spring tension adjustment. These machines are dependent upon the equality of in-



A TENSION TESTER can be used effectively to check all yarns for equal tension. The tension tester shown at left was supplied by the braiding machine manufacturer. Right, accumulations of lint or foreign matter may cause tension to vary on flat-bed braiders. Superintendent points to tangled lint on an 8-carrier flat bed braider. There is no spring tension adjustment on this machine, and it is important to keep it clean.

herent tension in the springs. Excessive friction, rust on the spring guide, or any other obstruction can cause unequal or uneven yarn tension on these machines; therefore good lubrication is important in addition to keeping the machines clean.

Lubrication. In lubricating Wardwell braiders, there are two primary points to remember. First, the hole in top of beater stand supplies lubricating oil to the upper part of assembly, and part of this oil drains down into the main oil reservoir in the bowl, thereby helping to replenish the supply of oil in the bowl. The second point to remember is the upper carrier. Oil at this point lubricates both the carrier and the track plate.

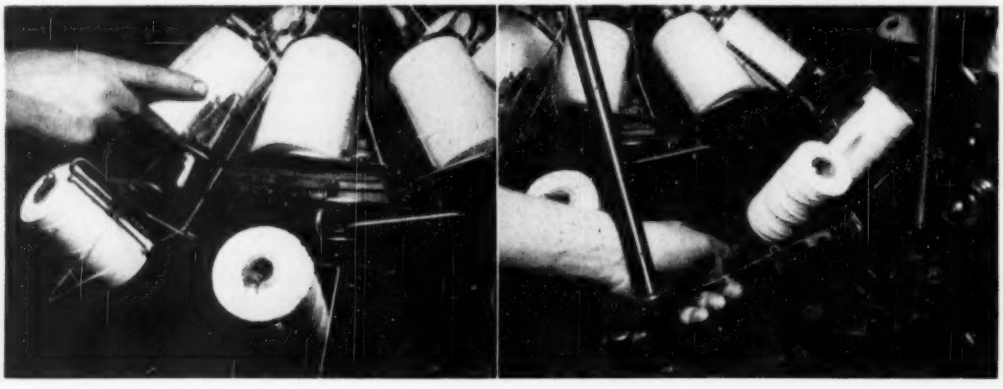
At least one inch of oil should be maintained in the driving bearing reservoir. Should the oil level get below the required one inch, the base of the braider does not contain enough oil to lubricate the driving gears and lower ball races. It is important to add oil through the cover cap hole and not directly into the reservoir.

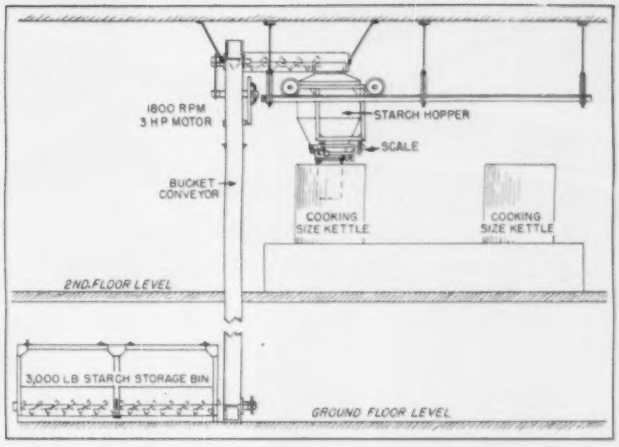
A spring type oil can is recommended to apply oil into the opening in the driver plate cover cap. Three squirts of oil are sufficient to lubricate the driver plate, and the same amount should be applied to the cam ring through the oil plug that is located in the driver plate cover.

Only a small quantity of oil is required in the hole at the outer end of the driving bearing to lubricate the driving shaft at that point. Also, a small brush approximately $\frac{3}{8}$" wide can be used to good advantage in applying a small quantity on the upper carriers in the track plate. All bearings and oil holes should be lubricated once during every 40 hours of operation.

Lubricants. The use of too much oil, or oil with a heavy body will reduce the speed of the braider; therefore a good grade of light motor oil is recommended. Never use clear kerosene nor a combination of kerosene and lubricating oil on any parts of the braider. The use of kerosene causes excessive wear where it is applied and renders those parts useless in addition to placing additional strain on other parts. Power consumption is greatly increased when improper lubricants are used. On Wardwell braiders, use a good grade of light motor oil having a viscosity of 350 seconds S.U.V. at 100 F and 58 viscosity at 210 F.

TENSION on the upper carrier (left) affects tension on the upper supply ratchet, and the yarn delivered from each of the carriers must be the same to attain an evenly braided cord. Right, it is worthwhile on fine work to double check the yarn tension instead of relying entirely on the notch setting on the spring tension quadrant.





Elevation showing how the starch handling system operates at Riegel. There are six size kettles which can be fed from the conveyor installation.

Size Cooking Simplified with

Starch Handling Equipment

AUTOMATIC starch weighing and meter control of water supply improve efficiency and cleanliness in size cooking. Conveyor moves starch from storage bin to hopper and from there to cooking kettles without any manual handling. Automatic scales and water meter aid in maintaining a uniform size.

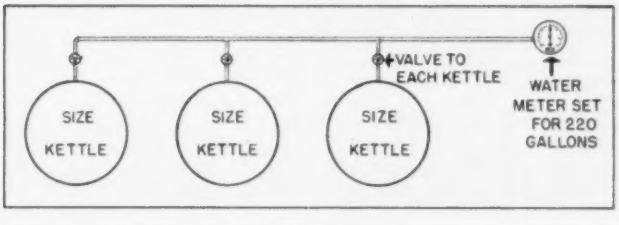
Staff Prepared

EXCLUSIVE

RIEGEL Textile Corporation, Trion, Ga., has recently installed a new system for automatically handling starch and water in the size cooking operation. The old system was inadequate in that size handling was a production bottleneck, and slasher production was retarded because of the outdated circulating system in use before the changeover to automatic starch handling.

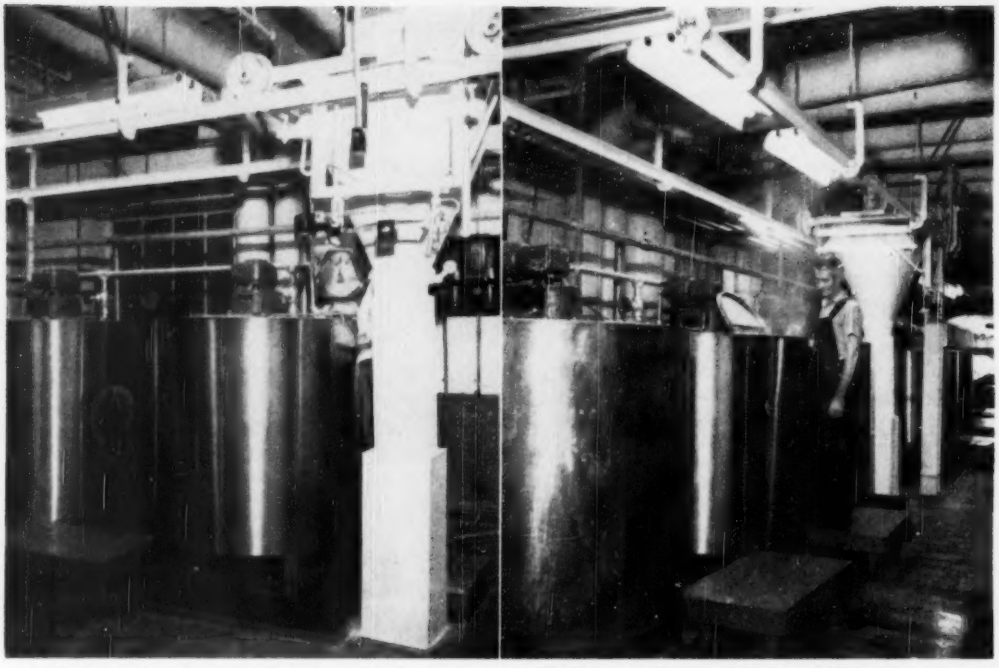
The present installation was selected after considerable study from the standpoint of simplicity, cost, and operating efficiency. Flour mills and bakeries have many handling problems similar to those of handling starch in textile mills; therefore the flour mill type of equipment was examined and the present installation at Riegel for handling starch is an adaptation of equipment used in flour mills and bakeries.

Diagram showing water lines from meter to size cooking kettles. Each kettle has a valve which must be opened or closed manually in accordance with the need.



New System. A 3000 lb starch storage bin is located on the ground level floor beneath the slasher room, and bags of starch are opened by hand and dumped into the storage bin. A screw type conveyor moves the starch from the storage bin to a bucket-type vertical conveyor which carries the starch to a hopper located on the second floor where six new size cooking kettles are located. Three new 48" stainless steel kettles are presently being fed by the new handling equipment. The other kettles are now used for size storage.

A set of scales mounted on the starch hopper can be set to stop



Left, automatic scales on starch hopper can be set to stop the conveyor after a selected weight of starch has been delivered to the hopper. At Riegel, a mercury switch is utilized to break the electrical circuit after 300 lb of starch have been delivered to the hopper. Overhead switch at hopper operates manually to start the conveyor. Note the water meter dial slightly to the left of the hopper. Right, overhead tracks support the hopper which is mounted on wheels to permit the operative to deposit the starch in any one of the cooking kettles. The white column to right of hopper is part of the bucket type conveyor which feeds starch to the hopper from a bin on the floor below.

the conveyor after a selected weight of starch has been delivered to the hopper. A mercury switch is utilized to break the electrical circuit on which the conveyor operates. The scales are set at Trion to measure 300 lb before stopping the conveyor feed mechanism.

The hopper is suspended on a twin rail track, and when the desired number of pounds of starch have been deposited therein, an operative moves the hopper along the track manually until it is in position over one of the size kettles. A butterfly type valve in the bottom of the hopper can then be released to permit the starch to fall into the size kettle.

Automatic Water Meter. While the conveyor is in operation filling the hopper with starch, an operative sets a Neptune water meter for the desired number of gallons to be pumped into each size cooking kettle (220 gallons in this instance). A valve is opened on the water line into the first kettle to be filled, and when the water meter is turned on, water passing through the meter cuts off the flow after 220 gallons have been delivered to the kettle. The cycle is repeated for the next kettle to be filled, etc. The meter has to be reset each time a kettle is filled, and the water valve to each kettle has to be opened and closed before and after operating the water flow meter while filling the kettles in sequence.

Statistical Methods of Quality Control Subject of Georgia Meet

The Georgia Section of the American Society for Quality Control is planning a meeting on the application of statistical methods of quality control in the textile industry.

This meeting has been tentatively set for September 23 at the Georgia Institute of Technology in Atlanta.

Complete details of the program are not available at this writing. however subjects to be discussed by the speakers and exhibits will cover all phases of manufacturing from raw materials to and including acceptance sampling by the consumer, according to W. S. Smith, president of the section.

Additional information regarding this meeting can be had by addressing Mr. Smith at Research Division, West Point Mfg. Co., Shawmut, Ala.

Stop Motion Protects Fly Frame Gearing

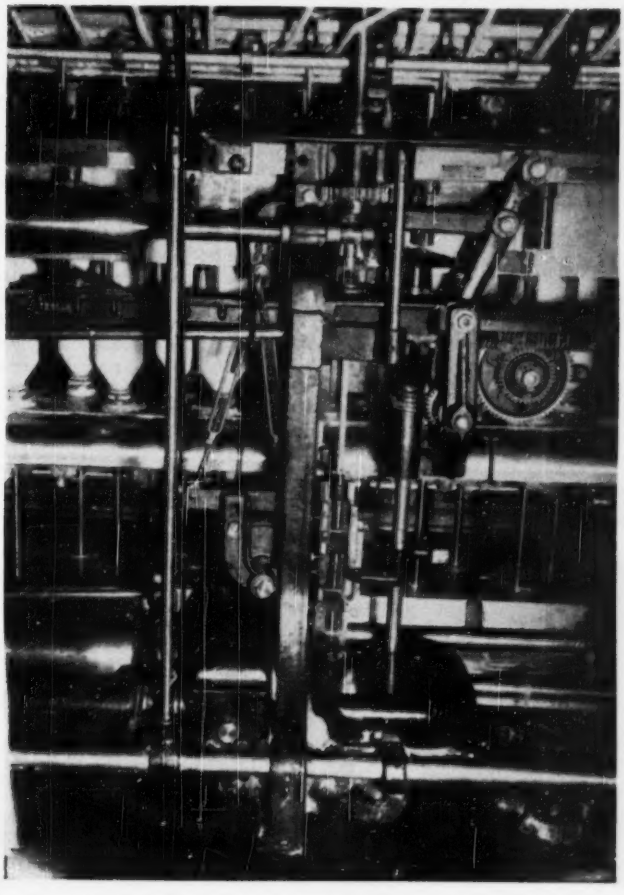
Staff Interview

AN INTERESTING and effective stop motion for the builder mechanism of fly frames has been in operation for about 12 months on a number of frames at Joanna (S. C.) Cotton Mills Co.

For many years, the mill had occasional trouble resulting from the failure of the builder motion to reverse itself. Lint, hardened oil, or some other substance would work itself into the gearing, and the tumbler shaft would fail to turn at the proper time, thereby causing the builder motion to continue on past its proper point and not reverse itself.

Whenever the builder fails to reverse at the top or bottom of its traverse, not only is the roving carried off its proper course, but the gearing which drives the rack and the cone belt guide is jammed and often damaged.

Close-up of fly frame builder mechanism with stop motion.



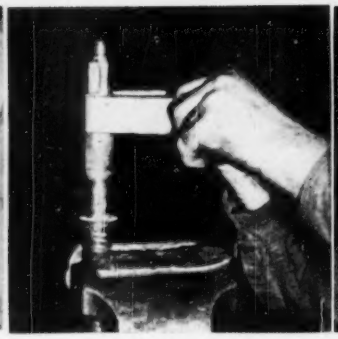
To avoid this damage of the gearing, Johnny J. Seawright, of the Joanna mill, invented a mechanical stop motion which will actuate the frame's knock-off lever any time the tumbler shaft fails to make its half-turn at the end of a traverse.

The design of the stop motion is quite simple. Two small trips or fingers are attached to the left side of the builder jaws, as shown in the photograph. The vertical position of these trips is adjustable, the set screws which permit their adjustment being clearly visible in the photograph. Should the builder dogs and tumbler shaft fail to rotate their half-turn at the end of a traverse, the continued movement of the builder jaws will force a contact of either the top or the bottom trip with a lever and gear arrangement which can be seen just to the left of and behind the frame leg in the center.

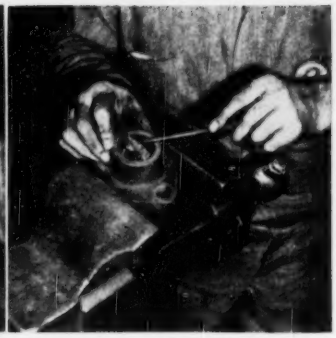
This motion is further transmitted through shafts (formed by the turnbuckles) to the knock-off lever arm. If, of course, the tumbler shaft makes its half-revolution at the end of a traverse, the trips do not contact the lever which starts the cut-off motion.

While this stop motion is successful in stopping the frame before any gearing is damaged, it does permit the drive to coast to a stop, with the result that roving runs over top or bottom of bobbins. This is a fault inherent in any fly frame attachment which depends on the regular full-bobbin stop motion to shut down the machine.

When a leaky gate valve is discovered, remove the bonnet and examine the disc and body thoroughly to determine the extent of damage to body rings and disc.



Remove the stem from the bonnet and examine it for scoring and pitting where the packing contacts the stem. Light polishing with fine emery cloth may suffice.



Remove all packing and thoroughly clean the stuffing box. At the same time, clean the inside of the valve bonnet and other parts to remove dirt, scale, and corrosion.

Valve Maintenance

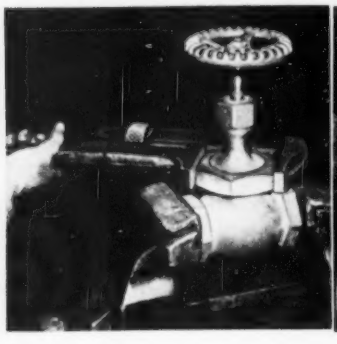
By R. A. HENDRICKSON
Manager, Oil Sales
Crane Co.

Periodic inspections and prompt repairs recommended

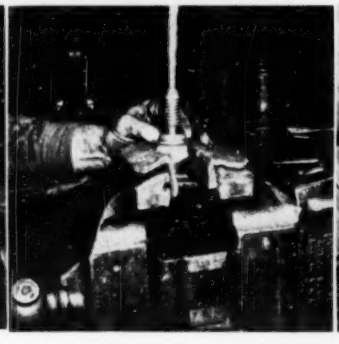
GOOD valve service can be secured through proper selection and installation followed by prompt maintenance and repair of leaking or damaged valves. Even the best valve cannot be expected to work at its best and stay on the job if it is incorrectly installed. Nor can it be expected to stand up very long after it develops a seep or a leak.

After valves have been properly selected and installed, maintenance can be reduced by a surprising amount through periodic inspection. Service conditions and frequency of operation will determine the frequency of inspections. But once the interval of valve inspection has been established it should be made regularly and systematically. When routine valve inspection discloses a leakage, steps should be taken immediately

In repairing globe and angle valves, hold the valve firmly in a vise, with the stem vertical. Remove the bonnet assembly so that all parts may be cleaned.



Remove the stem from the bonnet, place in the vise and unscrew the disc stem ring. Lead between the vise jaws and the valve prevents damaging, yet holds it firmly.



After the disc stem ring has been unscrewed, lift out the stem and insert a spacer or coin inside the disc. Then replace the stem and tighten the disc stem ring.

If the valve has a flat gasket, it should be removed completely and replaced with a gasket of correct size and made of suitable material to prevent further difficulty.

Place the disc in a vise with seat face up. Wrap a piece of fine emery cloth around a flat tool, and rub or lap the entire bearing surface to a smooth even finish.

The usual cuts and scratches found on body seat rings can be repaired by lapping. Use an emery block small enough to rub the seat-ring faces thoroughly all around.

to correct the trouble before the valve becomes damaged beyond repair.

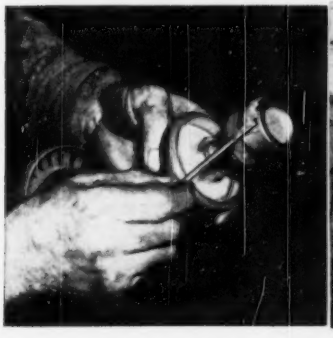
Stuffing Box Leaks. Stuffing box leakage is one of the most common troubles encountered in valves. This trouble occurs when improper packing is used or when packing is worn. Leaks may be evidenced by steam "flags," by unaccountable presence of moisture on piping or valve bodies, or by outright dripping. Leaks should be attended to immediately upon discovery. Don't hesitate to break into insulation if a leak is suspected underneath. Such hidden leaks are especially damaging to bolts, pipe and flanges. All leaks are conducive to corrosion.

If it is necessary to look for a leak under pipe insulation, to minimize damage to the insulation, it is advisable to puncture the insulation with a wire at suspected location, thereby permitting leakage to escape. Another practical method is to insert a pipe nipple through the insulation at each flange joint. Drainage from the nipples will indicate leakage in the line.

Neglected stuffing box leaks will eventually damage valve stems. Most stuffing box leaks can be stopped simply by pulling up the packing bolts, or by tightening the valve gland nut. Be sure to tighten bolts uniformly. If tightening the packing gland does not stop leaking, it is a simple matter to replace the packing. To repack, loosen all stuffing box parts and remove the old packing, using a bent wire or other hook to clean the box thoroughly. Insert the new packing and tamp it well into place. Add a few drops of oil between layers to help work in the new material. If ring packing is used, be sure to stagger the ring splits, so that they are not all in line.

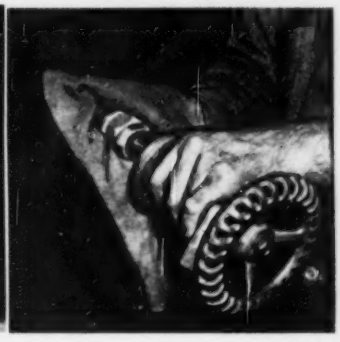
Gasket Leaks. If a leak is allowed to continue at a bonnet joint or a flange joint, it is not just the gasket that suffers; the joint faces are soon ruined too. If bolt take-up does not cure a joint leak, replace the gasket immediately. The type of gasket material to be used is important. Gaskets are of three general types; flat-ring gaskets which cover the face of the flange

After taking up the clearance between the disc and stem, apply an emery-base grinding compound to both the disc and seat. A light coating of compound is all that is necessary.

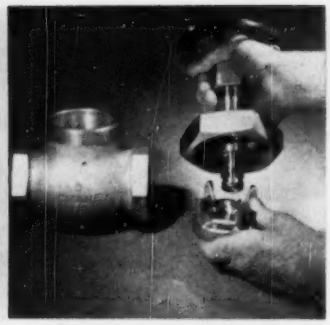


Place the body and bonnet together. If the valve is a union bonnet design, the union ring should be screwed on, but not tightly. For a bolted bonnet, insert a couple of bolts.

Grind no more than is necessary to obtain a smooth bearing on the seating surface. Remove all compound from the disc seat and body. Use Prussian Blue to ascertain good bearing surfaces.



In replacing a composition disc in a globe or angle valve, turn the stem to open position, unscrew the bonnet joint, and lift out the entire bonnet assembly.



Turn the stem down slightly until the disc holder slips off, remove the disc retaining nut on the under side of the holder, and replace the disc. Then reassemble the valve.

to the inside of the bolt holes, full-face gaskets through which the flange bolts pass, and metal rings of elliptical cross section fitting into machined grooved flanges.

Gasket materials include rubber, asbestos composition, and soft metals. Rubber gaskets are generally used for low pressures at normal temperature. As pressures increase in cold service, and for hot service up to 750 F, asbestos compositions are frequently used. Metallic gaskets are extensively used when steel valves are installed.

Variations in gasket materials are so wide, however, that manufacturers' recommendations should be considered before the material to be used is selected. Various types of gaskets take different treatments before they are inserted in the joints.

Repair of Seat Leaks. If a valve cannot be shut off tightly, the cause of the trouble should be investigated without delay. If a leak is neglected, the seating surfaces may be damaged to the extent that replacement of parts or of the complete valve may be necessary.

When a leaky gate valve is discovered, remove the bonnet and examine the disc and body thoroughly to determine the extent of damage to body rings and disc. If corrosion has caused excessive pitting of metal in the guide ribs of the valve body, it may be impractical to attempt repairs. A complete check-up and servicing of all parts of the valve are recommended. Remove the stem from the bonnet and examine it for scoring and pitting where the packing contacts the stem. Light polishing with fine emery cloth is all that may be needed to put the stem in good condition.

Remove all packing and thoroughly clean the stuffing box. At the same time clean the inside of the valve bonnet and other parts to remove all dirt, scale, and corrosion, so that the interior of the valve will be free of all foreign particles. If the valve has a flat gasket, it should be removed completely and replaced with one of proper material and size.

If a ring type joint is used, the oval or octagonal metal ring can be cleaned, and if not pitted, it can be used again. After cleaning and examining all parts, and it is found possible to repair the valve by refinishing disc and body seat rings, or by replacement of body seat rings, proceed as follows:

Place the disc in a vise with seat face up. Wrap a piece of fine emery cloth around a flat tool, and rub or lap the entire bearing surface (both sides of disc), to a smooth, even finish. Remove as little metal as possible. The usual cuts and scratches found on body seat rings can also be repaired by lapping. Use an emery block small enough to rub the seat-ring faces all around.

Work carefully and watch closely. Avoid removal of too much metal to prevent the disc from seating too low. When seating surfaces (discs and body seat rings) seem to be properly lapped, coat the face of the disc with Prussian Blue and drop the disc into the body to check the bearing. When a good continuous contact is obtained between the disc and body seat-ring face, the valve will be tight and ready for reassembly.

When assembling, insert the stem in the bonnet, and install new packing. Assemble other parts, including the gland and gland flange, and then attach the disc to the stem. Replace the bonnet gasket, and place the complete assembly in the body. Lift the disc off the body seat-ring face so that the bonnet can be properly seated on the body before bolts are tightened. Pull the bonnet bolts up evenly in pairs diametrically opposite each other. Good practice suggests testing the repaired valve before putting it back into service. This assures that repairs have been properly made and that the stuffing box is tight.

When body seat rings in gate valves must be replaced, they can be removed and replaced best with a power lathe. Chuck the body with the rings vertical so that the seat faces will be parallel with the face plate. Use a steel bar across the body ring lugs to unscrew them. Removal of rings can be accomplished manually by using a cold chisel or hack saw to split the ring and then collapse it. Extreme caution should be taken so that the ring threads in the body are not damaged.

New rings must be pulled up tight against the shoulder on the ring so that leakage will not occur around the body ring. To tighten, place a steel bar across the lugs and pull up with a wrench. Be sure to coat the threads with a good lubricant before inserting the ring into the body. Lap in the same as when repairing a ring as shown for a perfect fit to the disc.

Globe and Angle Valves. Repairs on globe and angle valves frequently can be made without removing them from the line. However, it is desirable to remove the valve from the line for thorough inspection and cleaning. To

illustrate the general procedure for regrinding discs and seats in globe valves, a plug type disc valve is used. However, the same method applies to other globe and angle valves except those with composition discs. Procedure is as follows:

Hold the valve firmly in a vise, with the stem vertical. Remove the bonnet assembly and examine and clean all parts thoroughly. Remove the stem from the bonnet, place in the vise and unscrew the disc stem ring. Lift out the stem and insert a spacer or coin inside the disc. Replace the stem and tighten the disc stem ring; the spacer takes up the clearance between the disc and the stem. Apply an emery-base grinding compound to both the disc and the seat, and a light coating of compound is all that is necessary.

Place the body and bonnet together. If the valve is a union bonnet design, the union ring should be screwed on, but not tightly. For a bolted bonnet insert a couple of bolts, but do not tighten the bolts. This will provide a guide for the stem.

With a firm hold on the hand wheel, apply pressure and oscillate the wheel steadily until all pitting is removed and a continuous smooth bearing on the seating surface is obtained. Grind no more than is necessary for good bearing. When grinding is completed, clean the disc seat and body of all compound. Use Prussian Blue to determine if a good bearing has been obtained. The valve can then be reassembled. (Be sure to remove the spacer from the disc so that it will have free swivel action on the stem).

When the body seat rings have been damaged beyond repair, they should be replaced. This can be accomplished with a tool specifically designed for the purpose, or by means of a bar fitted into the lugs or slots in the body ring. Before using the valve, it is advisable to give it a pressure test to be sure the seat and stuffing box are tight.

Composition Discs. Replacing a composition disc in a globe or angle valve as soon as a seat leak is discovered will add much to the valve's life. The procedure is easy.

First turn the stem to fully open position. Unscrew the bonnet joint and lift out the bonnet assembly. Turn the stem down slightly until the disc holder slips off, and remove the disc retaining nut on the under side of the holder, and replace the disc. Then reassemble.

Where frequent disc changing is necessary, it is worthwhile to keep a few extra disc holders and discs on hand. Holders can be loaded with discs for various services when convenient. This feature simplifies maintenance and stock problems for composition disc-valve parts.

Remote Control for Mill Gate

Many mills have a gatekeeper or watchman who opens and closes the entrance into the mill or mill grounds. In some instances the job of opening the gate to admit callers is left to an operative who has to leave his job intermittently to attend the gate.

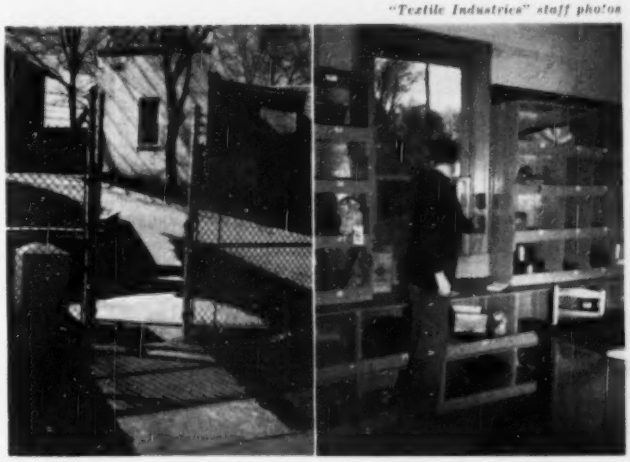
One mill has installed a system of remote controls whereby the supply clerk can control the gate without leaving his job. The gate into the mill grounds is located where the clerk can observe callers through a window. A bell button is provided at the gate so the clerk can be signalled by a bell in the supply room, should he be busy when someone desires admittance.

A three-button control located in the supply room permits opening the gate, closing the gate, and stopping the actuating mechanism should an accident or breakdown occur. An electric motor beside the gate supplies the force to open and close the gate in response to the control buttons in the supply room.

Management at this mill asserts that the remote control has paid for itself in a short time in labor savings, and individuals are no longer kept waiting for someone to admit them. There has been no maintenance cost on the installation, and no difficulty has been encountered in operating the gate by remote control.

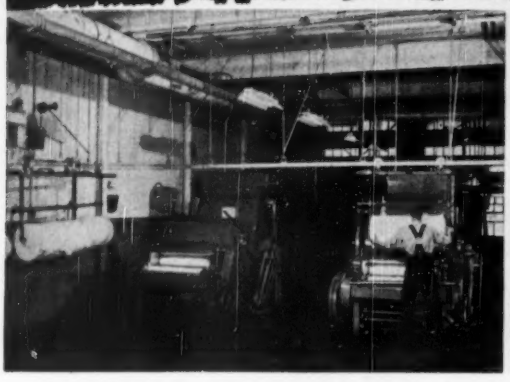
Left, electric motor which operates the gate is located inside the box on left side of gate, which is open to admit a caller. Supply clerk observes callers from window in center background. Note the bell button at lower left corner of sign on right side of gate. Right, supply clerk operates the remote control buttons upon identifying a caller through the window.

"Textile Industries" staff photos

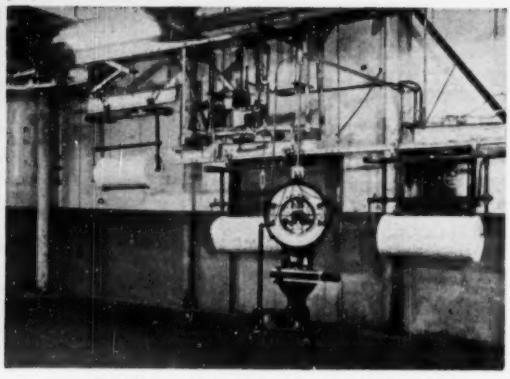


AUTOMATIC LAP DELIVERY

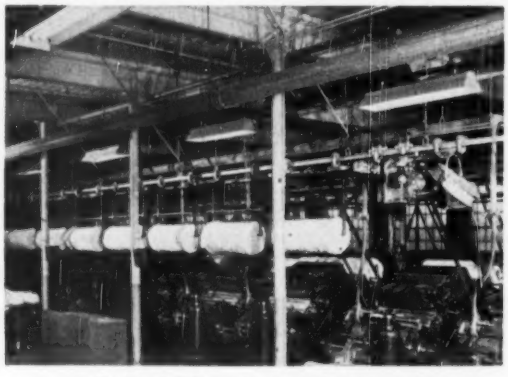
that Reduces Handling Cost
Eliminates Lap Waste
Keeps Ceilings Clean



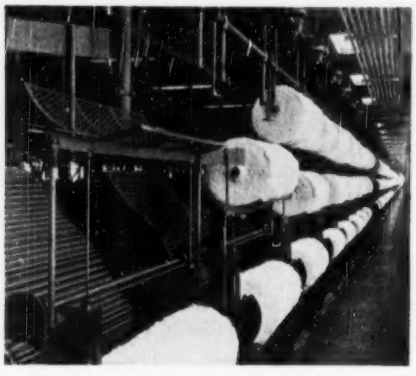
1. Carrier manually loaded at pickers; all subsequent handling entirely automatic.



2. Weight checked within 1½ lb. tolerance. Off-weight laps rejected — full-weight laps delivered to card room — all automatic.



3. Train of 20 carriers travel over cards — pushed by MonoTractor which also propels ceiling cleaner.



4. Lap automatically deposited in receiving tray. Weight of lap lowers tray, allowing passage of following carriers.

Many mills are looking to American MonoRail for better, quicker and more economical automatic handling and cleaning. An American MonoRail engineer will be glad to discuss your problems.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE **CLEVELAND 7, OHIO**

HOW TO PREVENT KINKY FILLING

Following is a summary of measures recommended for the prevention of kinky filling by mills that are not conditioning filling yarns:

(1) Use bristles in shuttles; on large package (8¾" quills) shuttles use rabbit fur along with the bristles.

(2) Use correct filling twist.

(3) Use bristle binder where possible.

(4) Time and set harnesses properly.

(5) Align shuttle boxes and pickers.

(6) Adjust power properly.

(7) Divide heddles properly.

(8) Keep protection motion in good repair.

(9) Age filling 24 hours in weave room before using.

Weaving Discussion

Report of Practices in Alabama Mills

Overhead Cleaning • Loom Cleaning • Supply Costs
Quality Control • Loom Drives • Warpwise Streaks

*Staff Report**

Overhead Cleaning in Weave Room. As might have been expected, as many methods of cleaning overhead in weave rooms were given as the number of reports presented, cleaning schedules and systems being governed by the type of goods being manufactured, air conditioning system, etc.

"The overhead in our weave room is cleaned with compressed air and mops when looms are stopped on week-ends," said an overseer of weaving when this question came up for discussion. "This includes ceiling and inside of ducts. During the week the outside of the ducts, walls and columns are cleaned with mops." Drills, twills, and jeans are being manufactured in this plant. Duct type air change and humidification system utilized.

Another overseer reported: "We use a 12 to 14 foot pipe attached to the air hose. We assign two cleaners to each hose, as it is a tiresome job. Each cleaner gets a break at different intervals. Before cleaning down overhead, we use burlap to cover the area which is to be cleaned to prevent fly and overhead oil from damaging cloth. We try to do this type of cleaning every two weeks." Ticking and terry cloth are made here.

Two men are kept busy blowing overhead lights, ceiling, etc., on one shift every day (mill runs two shifts) in a mill making osnaburgs. An air hose with a long aluminum pipe is employed for this work. Central station type air change system is installed.

Cleaning Looms (Warp Out). Evidence of increased use of solvents such as kerosene and mineral spirits for cleaning looms when warps are out was prevalent.

A loom blower and greaser combination is used for thoroughly cleaning looms when warps are out in a plant that uses white kerosene. Special attention must be given to oiling the loom parts when using kerosene, according to the weave room overseer at this mill.

"Does kerosene affect the let-off brake?" questioned an interested participant from the floor. The answer was that there have been no complaints from the loom fixers.

Routine Loom Cleaning. It is still common practice in most of these mills to blow off the fronts and backs of the looms daily. One mill blows off fronts, harnesses, and under looms twice per 24 operating hours; whereas backs and drop wires are blown off once in 24 hours.

Someone asked the question "How do you prevent spots on fabric when you blow off your drop wires daily?" Oil spots due to this operation were not a problem, according to comments received from the floor.

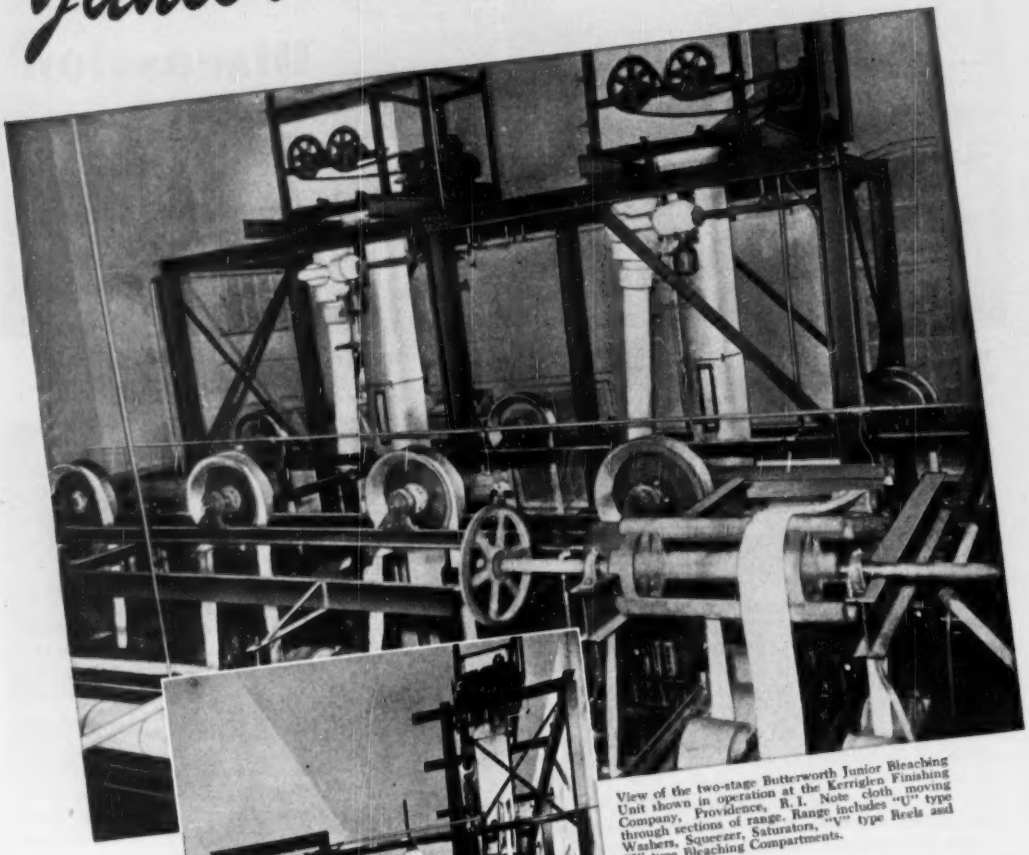
Cleaning Heddles, Reeds, Drop Wires. Blowing off these parts with compressed air is the method most used for cleaning them, according to an analysis of reports submitted. Exceptions are listed herewith:

Mill A. We blow off patterns with compressed air when they are taken to the tying-in room. Oil is sprayed on the heddles after cleaning. Reeds are cleaned, before they are stored, with motor-driven circular bronze wire brush and then oiled.

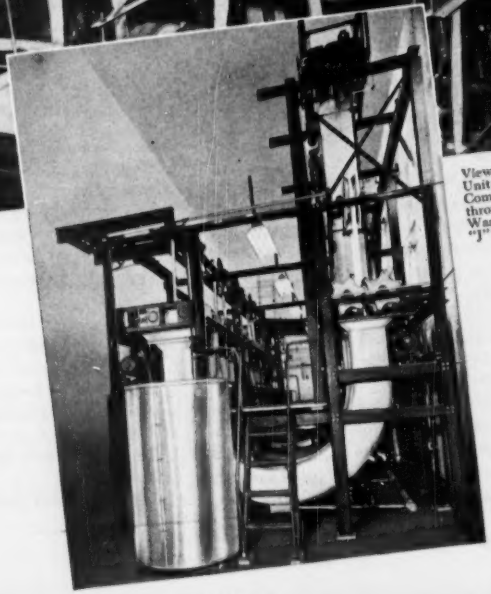
Mill B. A reed polishing machine

*Continuation of report of the semi-annual meeting of Alabama Textile Operating Executives. For slashing discussion summary, see the July issue of TEXTILE INDUSTRIES. It begins on page 105.

Here's on-the-job proof of Junior Bleaching Unit



View of the two-stage Butterworth Junior Bleaching Unit shown in operation at the Kerrigden Finishing Company, Providence, R. I. Note cloth moving through sections of range. Range includes "U" type Washers, Squeezer, Saturator, "V" type Reels and "J" type Bleaching Compartments.



Compact height of the two-stage Butterworth Junior Bleaching Unit installed at Kerrigden can be seen in this view of the range. Control of range is from center of the Unit on operating floor.

Production!

A two-stage Butterworth Junior Bleaching Unit is now in successful operation at the Kerriglen Finishing Company, Providence, R. I., bleaching 4 yard, 80 x 80 print cloth, at the rate of 700-900 lbs. per hour. Now—actual proof that it's possible to get high quality bleaching continuously and economically with the Junior Bleaching Unit. The Unit installed at the Kerriglen Finishing Company is a *complete* bleaching range developed in conjunction with DuPont for small production bleaching.

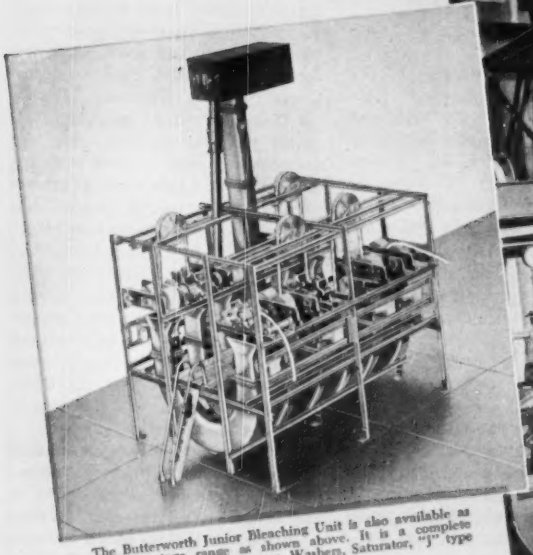
You can put a Butterworth Junior Bleaching Unit to work profitably in your mill bleaching knit goods, colored yarns, print goods and other fabrics. It gives the efficient small mill or the large mill doing specialty bleaching the economies of continuous peroxide bleaching. The machine shows some savings in steam consumption, and only one man is required to operate the Unit as compared with two men on conventional ranges.

The two-stage Butterworth Junior Bleaching Unit requires a floor space only 13 x 16 feet. The J-box is approximately 28 feet in height, but this height requirement may be reduced somewhat by placing the bottom of the J-box in a pit below the floor line. Cloth is handled gently and efficiently with patented Butterworth tension control devices. Inspection windows permit easy checking throughout the bleaching operation.

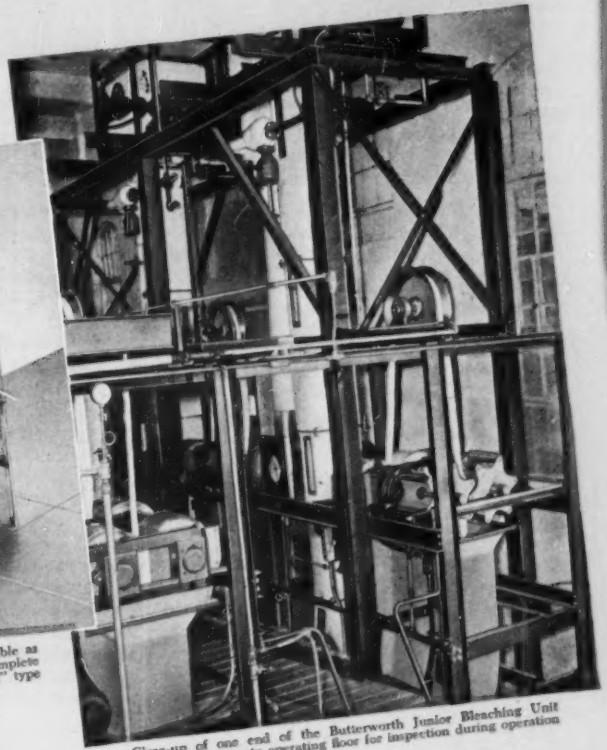
Get the complete details on the Butterworth two-stage Junior Bleaching Unit today. Write for Bulletin No. 200.

H. W. BUTTERWORTH & SONS CO.
Philadelphia 23, Pa. — 40 Fountain Street, Providence, R. I.
1211 Johnston Building, Charlotte, N. C.
In Canada: W. J. Westaway Co., Hamilton, Ontario

BUTTERWORTH



The Butterworth Junior Bleaching Unit is also available as a single stage range as shown above. It is a complete operating Unit with Squeezer, Washers, Saturator, "J" type Bleaching Compartment and Reels.



Close-up of one end of the Butterworth Junior Bleaching Unit shows easy access to operating floor for inspection during operation of range.

Alabama Weaving Discussion

★ **Cleaning Heddles, Reeds, Drop Wires**

★ **Supply Costs on X Series Looms**

★ **Quality Control in Weaving**

is used for cleaning reeds. For heddle and harness cleaning we have a table, the center of which is fitted with a motor-driven 8-inch roller covered with card clothing. Harness to be cleaned is placed on table over roller, and when it is started lint is removed from heddles and harness frames. Drop wires and bars are cleaned by wiping them off with waste.

Mill C. Reed cleaning machine is used on reeds. Heddles and drop wires blown out with compressed air.

LANGDALE (ALA) MILL REPRESENTATIVES included (left to right): **A. W. Hawkins,** cost supervisor, **H. J. Duffey,** cloth room overseer, and **Robert L. Rearden,** superintendent. On the extreme right is **Col. Morrow,** attorney of Shawmut, Ala., who was guest speaker for the occasion.

Mill I. Reeds are treated with cleaning oil. Nothing is used on heddles or drop wires except compressed air for blowing off.

Supply Costs on X Series Looms. The high operating speed of the X series of looms is probably the reason for greater supply costs, according to an opinion expressed by one operating executive whose plant is using 44-inch looms weaving drills, twills, sheeting, etc., at a speed of 188 picks per minute. In reply to the question "Do you find more supplies are required for the left hand side of these looms than for right hand side?" he said that more supplies are required on the driven end of the loom.

At another mill where Model X, X-2, and XP looms are weaving drills, twill, sateens, and chafers at speeds ranging from 147 ppm to 192 ppm, the overseer of weaving has found that the cost of loom supplies varies with the mechanical condition of the section—that is, if the section is in very good condition the cost per loom is very low; whereas if the section is in bad shape, the cost is usually very high. It was also this man's experience that more supplies are required for the driven side of the loom, believed to probably be due to maintenance of the driving mechanism and flexibility of end of loom away from motor.

Supply costs are 10% higher on 552 X-series looms in a mill making 80 x 80 print cloth. Looms range from 40 to 44 inches in width, picking at 180 ppm.

Of special interest to this group of mill men was the report that 15 left hand pick shafts on X looms break to every one right hand pick shaft. This has been the experience in a mill that has 32-inch and 42-inch Model X-2 looms. The reason for this had not been determined.

Following this report, another weave room overseer told of his interest in this subject and gave the results of his research into the matter. He found that twice as many replacements of pick shafts were required for the left hand side as for the right hand side. It was his opinion that this is brought about by positioning the power lugs lower on left side of loom in order to obtain proper homing of the shuttle on the right at those times when the filling quill is nearly empty.

Quality Control in Weaving. Of particular interest in connection with the discussion on this subject was the report rendered by a representative of one mill that has facilities right in the weave room for inspection of all cloth in the grey. With this arrangement it is possible to keep the inspection operation abreast of the loom production, thereby facilitating the tracing for sources of defective fabrics. All seconds are sent back for examination by weaver and fixer.

A weekly report is prepared that lists the style of goods inspected and the percentage of seconds produced each week on each style. Overseer holds meeting each week with supervisors from all shifts and goes over report thoroughly. All styles showing a high percentage of seconds are marked for checking by loom fixers. Loom stop reports are also used in quality control.

Another system said to be effective is as follows: Weavers doff cloth. Each roll is run over a lighted inspecting table and each defect found is recorded on a specially designed form which is sent to the weave room with the name of the weaver and number of the loom on which the cloth was produced written thereon. Weave room second hand takes a slip directly to responsible weaver and loom, and a check is made to determine if loom is weaving properly. If loom is in need of repair it is immediately stopped and fixer shown the defect slip in order that he might correct the trouble before more cloth is made. During the day and on week-ends second hands go over their looms looking for sources of trouble. Supply costs are checked by sections. A continuous loom overhaul program is in effect.

A "ticket system" is employed in another mill to aid in the maintenance of cloth quality. Cloth is inspected on folders, and defects are noted on tickets which are sent

to weavers every two hours. A "repeat file" is maintained on each loom and it is checked weekly for recurring production of defective fabrics. Responsible individuals are penalized for excessive repeats.

"An ounce of prevention is worth a pound of cure"—that is the thought that supervisory personnel in one mill attempt to instill in the minds of their loom fixers and weavers. Weavers are required to carefully inspect the cloth being made on their looms to prevent defective fabric being woven over a long period of time.

Loom fixers must inspect looms at beginning of each shift. Supervisors inspect with weaver all cloth rejected on his job each day and explain how he might have avoided defects.

Records are maintained on each weaver and section and both weavers and loom fixers are kept informed weekly of their progress. Weaver is responsible for weaving defects; loom fixer for mechanical defects.

Cloth room works closely with weave room, keeping them informed of defective cloth produced. Each loom is inspected by a supervisor twice in every 24 hours.

New Loom Drives. The Draper-Diehl loom drive, which consists of a motor with the clutch and brake enclosed therein, has been installed in an Alabama mill on 72 Model X-2 60-inch looms picking 160 picks per minute and weaving 51-inch sateen. The mill representative was unable to give information as to reduction in supply costs because of the short time that the drives had been in operation. Thus far the mill management is well pleased with the performance of the drive.

At another mill 24 Gates V-Belt drives are in operation. The unique feature of these drives is the fact that one motor drives two looms. Performance has been satisfactory, however, there has been some difficulty in keeping them adjusted and speeds up to standard. It is too soon to state whether there will be a reduction in supply costs. Loom speeds were increased from 156 to 172 picks per minute.

Alabama Weaving Discussion

★ **Quality Control (continued)**

★ **New Loom Drives**

★ **Causes of Warpwise Streaks**

Absorption of shock and smooth running lays are advantages cited for a new type of individual belt drive installed on 11 looms (10 48-inch Model E looms and 1 experimental 22-inch Model E) in a third Alabama mill.

A fourth and final report listed experience with a new V-belt drive which is performing quite satisfactorily with 1165 rpm motors; when used in conjunction with 1700 rpm motors the sheave is said to be too small, resulting in slippage.

CAUSES OF WARPWISE STREAKS

Listed here are factors that in the opinion of Alabama mill men contribute to the formation of streaks running warpwise in woven fabrics:

(1) Bad reeds.
(2) Lint.
(3) Heddles not properly divided.
(4) Open dents.
(5) Crowded dents.
(6) Temple marks.
(7) Harnesses not shaded properly or timed correctly.
(8) Mixed yarn.
(9) Part of quill getting between cloth return rod and tin roll.
(10) Heddles too tight on heddle ribs.
(11) Oil on yarn.
(12) Cotton of different grades mixed in preparatory processes.
(13) Wrong twist in yarn.
(14) Bobbins running too full on spinning frame with result that yarn is discolored by spinning ring.
(15) Uneven tension of some warp ends.

Careful inspection is the method most frequently recommended for detecting these streaks in grey goods. This inspection should be continuously conducted by weavers, fixers, supervisors and inspectors in the cloth room. Running cloth over a lighted glass in the cloth room is an excellent way to inspect for streaks, according to some of the mills reporting.

Textile School Planned for New Jersey College

The first textile school in a a New Jersey college will be constructed and ready for classes next fall at Fairleigh Dickinson College, Rutherford, according to an announcement by Dr. Peter Sammartino, college president.

Herbert R. Mauersberger, director, will set up a full-time day curriculum to include such subjects as orientation course on textiles, raw materials, textile chemistry, printing and dyeing, finishing and testing and identification of fabrics.

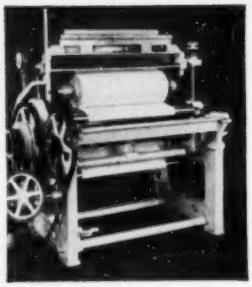
Study on Annual Reports in the Textile Industry

"Annual Reports in the Textile Industry" is the title of a study entered in the annual Williams senior essay contest at Lehigh University, Bethlehem, Pa. The study was made by R. W. Courtney, and no similar study has been previously undertaken, although extensive research has been made concerning annual reports in general.

Mimeographed copies of the study are available in limited quantities from the author whose address is 415 Third Ave., Bethlehem, Pa.

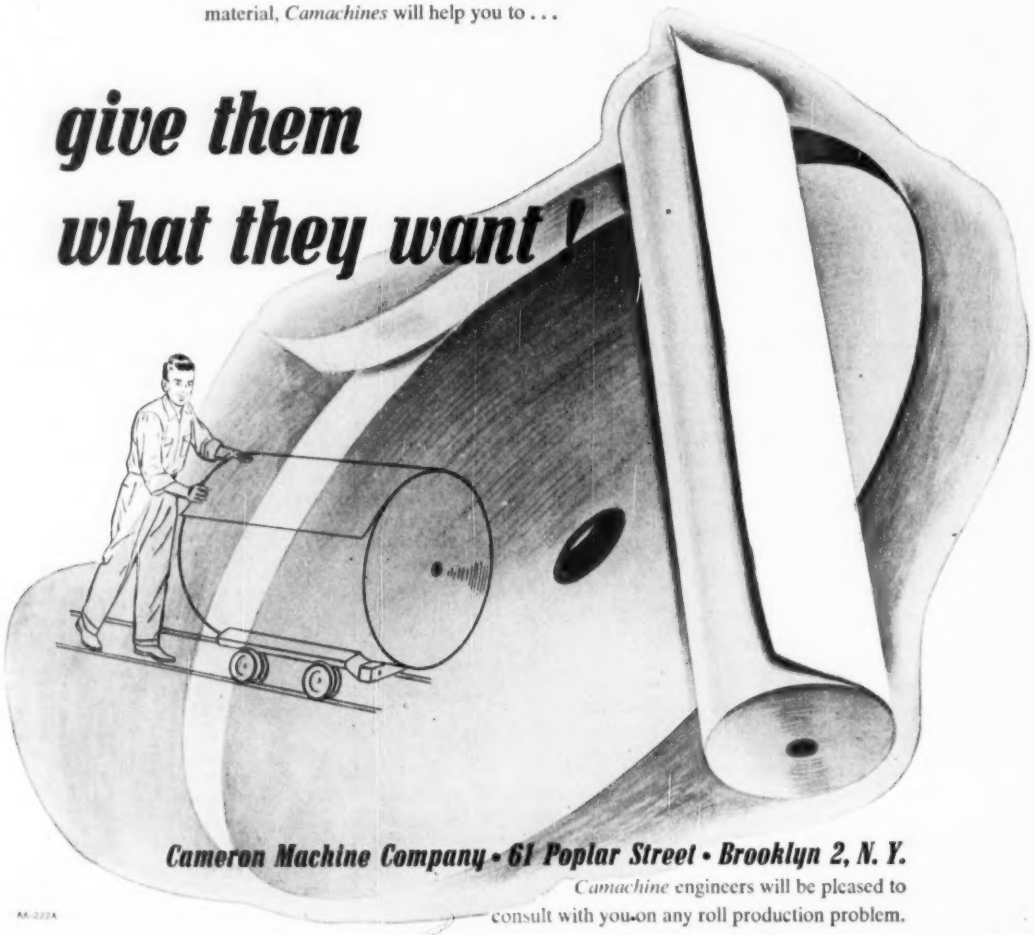
New Camachines have the right answer to your roll production problem. Whether it's a two-ton roll of newsprint or a half-ounce roll of plastic tape you give your customers better quality with *Camachine*-made rolls.

Camachines are designed and built by specialists in roll production equipment. No matter what material you handle you will be amazed by the performance of the new *Camachines*. Long rolls or thin rolls? Heavy or light? Paper, plastic, rubber or textile? Coated materials, tacky materials or materials of uneven caliper? When it comes to presenting your customers with better rolls of any size, any material, *Camachines* will help you to . . .



Get the facts on Camachine 6 —a fast slitter-rewinder for top quality rolls of binding tapes, felts, burlaps, coated fabrics, etc. Write for complete information.

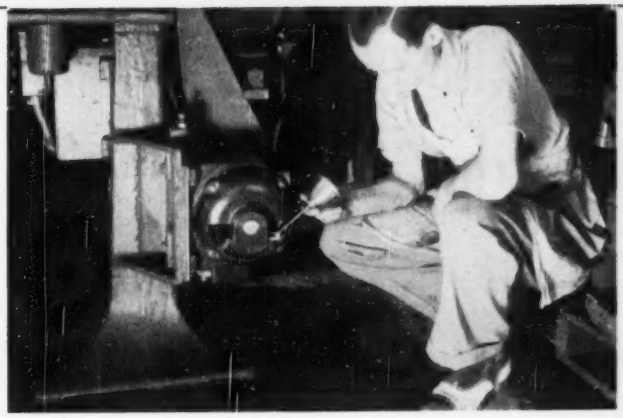
give them what they want!



Cameron Machine Company • 61 Poplar Street • Brooklyn 2, N. Y.

Camachine engineers will be pleased to consult with you on any roll production problem.

AA-222A



Stretch Oil and Grease Dollars

By WILLIAM LAW

"LUBRICATION IS NOT just having a can of oil or grease around somewhere and using it when bearings start to howl."

That is what a lubrication expert was telling us the other day. He went on, "Most cases of excessive lubrication costs are in mills where there is either too much carelessness or a lack of knowledge of how to get the most out of lubrication. There are lots of ways of making lubricating more economical and there are lots of short cuts that can be practiced to keep down costs."

Knowing that there is hardly a textile mill executive in the land who isn't interested in saving dollars on his yearly lubrication bill, if he can do it safely, we asked for some of these pointers and short-cuts. This expert supplied his advice; to this we have added suggestions by other lubrication experts, plus still other practices used by some leading mills. These form a handy chart which can well be posted in every plant for the guidance not only of its management but for every employee who participates in maintenance of the equipment in the plant, or who uses it in actual production of goods.

Here it is, in brief, easy-to-remember form:

Store Lubricants Correctly—Too much waste of lubricants is in their storage. It is never wise to keep lubricants in just any old place. It is always wise to have a cabinet in a proper spot, off the floor, kept under lock and key, where all of the plant's lubricants can be stored. Its location must be in a spot where it is not too warm and where there is a free circulation of air.

Handle Lubricants Carefully—Lubricants are not so inexpensive that they can be thrown around carelessly. Proper equipment for their application should always be used; sticks or cheap funnels only waste oils and greases. Keep the lubricant inside container; don't waste half of it by dripping over the side of that drum.

Containers should also be handled carefully for oil spilled on the floor is wasted.

Don't Over-Lubricate—This is as dangerous in actual practice as under-lubrication. Every bearing, every shaft, every unit needing oil or grease requires just so much to operate efficiently; when that amount is exceeded, the extra amount of lubrication adds nothing whatever to its effectiveness as a whole. Whoever takes care of the lubrication job in the plant should know exactly how much oil or grease is required in each spot and use no more; if he does not possess such knowledge the plant management can well inform him, or write the equipment manufacturer for that information.

Buy Quality Lubricants — No plant executive ever stretched his lubrication dollars by trying to save on purchases of oils and greases; it pays to buy quality. Only in quality greases can we obtain the proper balance to do the job effectively. Test after test

It's the fashion

and it's the fiber!

It's the fashion that sells a fabric,
but it's the fiber that keeps it sold!
And it's the fiber oftentimes
that helps a fashion click.

For topflight fibers
...in **nylon**
...in **acetate rayon**
...in **viscose rayon**
many houses look to Du Pont.

Du Pont technical skill
production experience
quality standards
contribute to performance ratings
worthy of the finest fabrics.

And Du Pont technicians
will gladly work with
your fabric sources:

FOR NYLON...FOR RAYON...FOR FIBERS

ACETATE DIVISION • NYLON DIVISION • RAYON DIVISION Rayon Department,

DU PONT

REG. U.S. PAT. OFF.

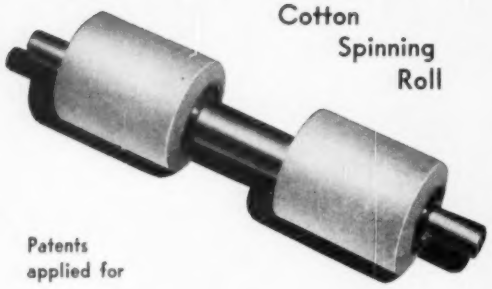
BETTER THINGS FOR BETTER LIVING

... THROUGH CHEMISTRY

TO COME... LOOK TO DU PONT!

E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware

CLIMAX BALL BEARING TOP ROLLS



Cotton Spinning Roll

Patents applied for

for ROVING and SPINNING

These modern frictionless rolls—

1) COMPLETELY ELIMINATE OILING in the drafting area. 100% saving on oil and oiling effort, 100% freedom from oil on yarn and cots.

2) REDUCE CLEANING. Roll picking minimized to intervals as long as several weeks apart. Practically no other cleaning.

3) GIVE MUCH BETTER RUNNING WORK. Fewer ends down, improved break constant, improved deviation, improved yarn appearance.

THESE ROLLS ADOPTED BY

Whitin MACHINE WORKS

and supplied by them as standard where anti-friction rolls are required. When ordering new frames, specify "Whitin-Climax Rolls".

MACHINECRAFT, INC. 21 Vernon Street Whitman, Mass.

Northern Sales:
R. K. BUTLER
Box 428
Whitman, Mass., U. S. A.

Southern Sales:
WATSON & DESMOND
P. O. Box 1954
Charlotte, N. C.

Argentina & Uruguay: Roberto Zander, Representante-Importador, 345 — Juan Jaures — 353 (Suc. 13), Buenos Aires, Argentina.

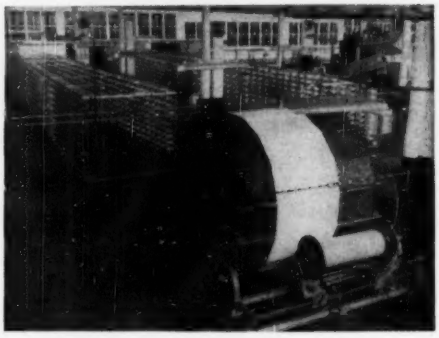
Brazil:
Eduard Seelig & Cia. Ltd.
Caixa Postal 5904
Sao Paulo, Brazil

Europe:
Mr. S. Gangitano
Milan, Italy
9 Via Saffi

Mexico:
Slobotzky, S. A.
Avenida, Uruguay 55
Mexico, D. F.

For High-Speed Warping

FROM CONES, SPOOLS, TUBES, OR PIRNS



SIPP-EASTWOOD

OVER-END MAGAZINE CONE CREEL

—for acetates, viscose, nylon, and other synthetic fibers, is made with three types of tensions:

1) Washer type. Employs double set of washers. Gives perfect tension for fiber yarns, as well as to fine denier flat yarns.

2) Pulley type. Retarding action obtained by friction applied to rotating members—not to the yarn.

3) Gate type, of hardened steel, gray satin finish, chromium plated to resist wear.

SIPP-EASTWOOD

HIGH-SPEED HORIZONTAL WARPER

Makes warps of rayon, acetate, and other synthetic yarns at speeds up to 500 yards a minute. Exceptionally heavy construction. Takes up to 28" beams at beaming end. Back lash eliminated. Heavy-duty, multi-speed motor. Static eliminator.

ITS A TRADE MARK SIPP EASTWOOD

Send for folders giving all particulars of these and other Sipp-Eastwood machines for efficient warping of synthetic yarns.

SIPP-EASTWOOD CORPORATION
45 Keen Street, Paterson 4, N. J.

has proven that in nearly every instance quality lubricants last far longer than inexpensive lubricants, do less damage to equipment upon which they are used, and are in the long run less expensive.

Use special Lubricants Where They Are Needed—Sometimes it will be more economical from the standpoint of decrease in breakdowns and higher production, as well as longer useful life of equipment, to investigate the use of special lubricants adapted for specific purposes. Check these also; spots where water is used in quantity, for example, or locations where motors operate near extreme heat. A special lubricant will deliver lubrication longer before it breaks down in most such spots and thus save money, even though it costs more than a general over-all lubricant.

Train Someone to Do the Job Right—It is common practice in far too many plants to turn the job over to just anyone, or to permit any employee to use lubricants; that is not a good practice even in the smaller plants. Whoever does the lubricating job should know that he is responsible for it; he should take his job seriously enough to be ever on the alert for ways of doing it better. No effort expended toward stretching one's lubrication dollar will succeed if the use of oils and greases is haphazard in the plant.

Be on the Alert for New Developments—No industry works harder at the job of improving its product, no industry spends more on research to find better products or better methods of using its products than the oil industry. These discoveries and this information are constantly available to any lubricant user who wants them; wise is the plant executive who sees to it that such products or methods are adopted, for that is indeed another good way to stretch one's lubrication dollars.

Make Sure of Bearing Seals—Probably the most wide-spread waste in lubrication is through inattention to bearing seals on all types of equipment. No lubricant can be kept on the job for its own useful life when it is permitted constantly to escape from its reservoir or container. It is profitable to check bearing seals constantly and make sure the lubricant, after it is applied is not wasted in this manner. The first sign of oil dripping beneath a bearing means a loose seal.

These are eight lubrication stretching pointers which can be used in any plant to the ultimate profit of the organization. They need only be applied both by the man who pays for them and the man who uses them! Stretch your oil and grease dollars!

Catalyst Eliminates Odors in Urea Resin Finishing

Simple laboratory experiments for mill-testing the efficiency of a catalyst in eliminating two known causes of odors from urea resin finishing have been recommended by Monsanto Chemical Company.

The know-how of comparing Catalyst AC with diammonium phosphate (DAP) was disclosed by Dr. Ralph F. Nickerson, group leader in the textile chemical research laboratory of Monsanto's Merrimac Division. Catalyst AC is a product of the textile chemicals department of the Merrimac Division.

The test method recommended specified placing equal quantities of concentrated urea resin solutions in watch glasses or foil cups. To one glass, five per cent of Catalyst AC, based on the urea formaldehyde solids present, is added. Three per cent of DAP on the same basis is added to the other. Both are evaporated to dryness on a hot plate.

With the DAP, resin soon starts to solidify and forms a thick mush in solution. In the case of Catalyst AC, the resin remains in solution until the mixture is practically dry.

When this stage is reached, both are cured for 15 minutes at 300 degrees Fahrenheit. The disc containing DAP appears as a light, frosty, porous cake. The Catalyst AC disc is dense, glassy and translucent.

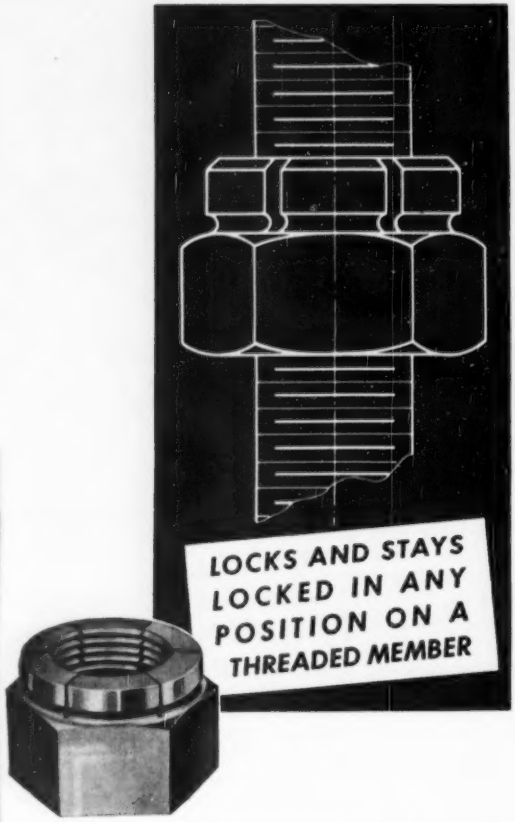
The discs are broken up in water and allowed to stand for several hours after which the pH of each solution is measured. Average pH of the DAP sample is 2.9; that of the Catalyst AC solution, 4.5.

These solutions are then made alkaline with soda ash solution. The DAP sample has a fishy, amine odor as well as the odor of formaldehyde. Only a formaldehyde odor is obtained from the sample cured with the Monsanto product.

"It is probable that the resin solutions behave the same way on cloth as they do in the watch glass," Dr. Nickerson said, "and it follows that DAP causes resin to solidify during the early stages of the drying operation. When Catalyst AC is used, the resin probably remains in solution until the fabric is nearly dry and consequently can adapt itself to changes in pore shapes, caused by the shrinkage of fibers during drying.

"This means that there is a greater area of intimate contact—and possibly more complete reaction—between the resin and the fiber.

"The higher pH of AC-catalyzed resins means there is less likelihood of fiber damage and, more important, less likelihood of the resin's decomposing into odorous amines during processing. It is possible, therefore, that Catalyst AC may reduce the danger of fabric odors by curing the resin under less acid conditions and by forming a dense resin that cannot trap gaseous by-products of the cure."



The one-piece, all-metal FLEXLOC is both a Stop and a Lock Nut, due to its resilient segments which Lock *positively*, anywhere on a threaded member . . . even under extreme vibration.

Torque is unusually uniform and kept within a few inch pounds. 550° F. temperature has no terrors for the all-metal FLEXLOC. The FLEXLOC design is very adaptable as evidenced by a steadily increasing number of highly unorthodox applications. "Thin" and "Regular" types; NC and NF threads. Officially approved by many U. S. depts., bureaus, etc.

For further information, write for Bulletin 619-A.

FLEXLOC

SELF-LOCKING NUTS

SPS STANDARD PRESSED STEEL CO.

JENKINTOWN 34, PENNSYLVANIA

in card clothing, too..

size and shape are important

Whether you need card clothing with round, angular or convex wire, you can be sure that the staples in Wissco Card and Napper Clothing will be accurate and uniform in size and shape. And that's mighty important if cards are to yield maximum production.

Because Wissco Card and Napper Clothing is built beyond the requirements of average service, it is being relied upon by a steadily growing number of boss carders. A test run on your own machines will prove our claims. Why not write today for detailed information and prices.

Sales Office and Plant: 56 Sterling St., Clinton, Mass.
Executive Office: 500 Fifth Avenue, New York 18, N. Y.
District Offices: Boston, Buffalo, Chicago, Detroit, Denver, New York, Philadelphia.
Pacific Coast: The California Wire Cloth Corporation, Oakland 6, Cal.

Wissco CARD AND NAPPER CLOTHING

FOR COTTON, RAYON, WOOL, WORSTED, ASBESTOS AND SPECIALTIES

CF&I

A Product of Wickwire Spencer Steel Division of The Colorado Fuel And Iron Corporation

Dyeing Wool Stock, Tops, and Yarn

By ROBERT W. JOERGER

Article 4*: Chrome Dyes (continued)

Metachrome Method. The metachrome method is the simplest since the dyeing and chroming occur at the same time with a gradual development of the shade. The dyer has full control at all times and shade matching is much easier. Since the two processes are combined, this method is less time consuming and therefore cheaper.

Although it was patented by Bayer* in 1900, the method was used indiscriminately with inferior results until 1918 when special dyes adapted to the method were developed. These have been supplemented during the last ten years so that there is now available quite a complete range of shades with excellent fastness properties. For the aforementioned reasons, this method is increasing in popularity with dyers.

Heavy shades (such as blacks and navy blues) are not generally dyed by the metachrome method, because under the special dyeing conditions these dyes do not exhaust well, making a full shade difficult to obtain. For the other shades, conditions must be carefully controlled to prevent surface dyeing with its poor pentration and crock fastness.

Dyes that (1) have affinity for the wool near the neutral point, (2) form the chrome complex without being precipitated by the chrome while in the dyebath, and (3) have depth of shade and completeness of chroming that are within practical range, have to be chosen. As stated previously, about half of the ordinary chrome colors are not suitable; therefore, dyestuff manufacturers have made and marketed others that are useable.

Where the same dyestuff is used in both the top chrome and metachrome methods, the latter is only slightly inferior in fastness — about ½ point in the 1 to 5 scale. The metachrome method shows up fiber selectivity more than the top chrome; however, it has other advantages: the dyeing process is considerably shorter, saving 1 to 1½ hours per batch; also, the dyes are less sensitive to other metals. The radical shade change caused

*Name of a large German concern existing prior to World War I.

*Articles 1, 2, and 3 were published in the April, May, and July issues, respectively.

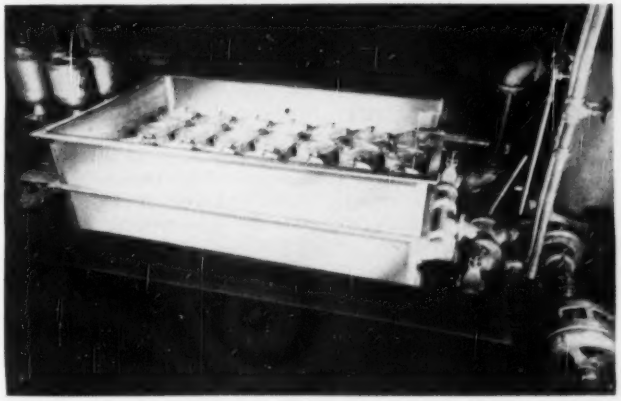
Obermaier-Stienen Can or Pot System Top Dyeing Machine

This machine was developed for use where extremely fine grades of worsted yarn are to be made from the wool tops.

In this system each top, weighing approximately 20 pounds, is placed in an enclosed stainless steel pot. The pots are built into the dye kier of the machine, and the liquor is circulated from the inside to the outside and reverse, as in other types of dyeing machines.

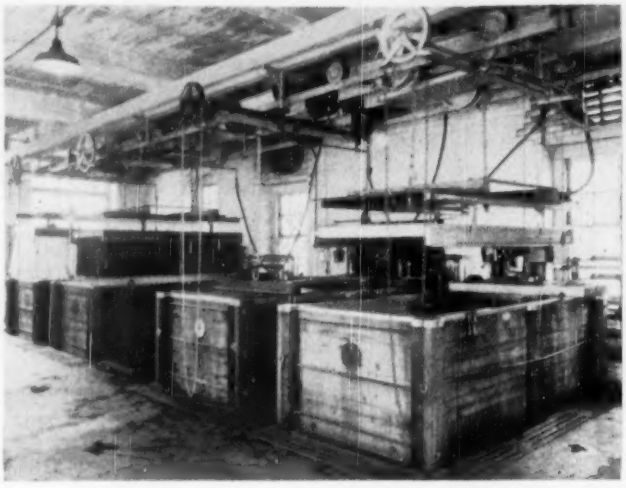
A vacuum station may be attached to this machine for the extraction of the tops. Air extraction is completed in a few minutes and tops are ready for removal.

The method by which the tops are removed from the pots is a special feature of this machine.



The covers are removed from the pots and the direction of the air is reversed. The air pressure lifts the tops from the pots for easy removal.

Courtesy, Standard Fabricators, Inc.



The Hussong Skein Dyeing Machine

Construction of the Hussong-Walker-Davis skein dyeing machine is the same as that employed in the previously described raw stock dyeing machine manufactured by this concern, except that instead of using a cage, the top cover is provided with self-unloading yarn racks where the hanks are hung on sticks.

These racks are easily lifted out of the machine, with the aid of pneumatic lifting equipment, and transferred to special trucks where the yarn can hang until drained.

In the accompanying installation photo, the machine at the extreme left has just been loaded with skeins of wool yarn ready for dyeing; second machine from the left has just completed dyeing a batch of skeins and the cover has been raised for removal of the skeins; the third machine from the left is in the process of dyeing a load of skeins, while the machine on the extreme right has just been unloaded.

Courtesy, Hussong-Walker-Davis Co.

by copper with certain colors and the dulling effect of iron with others are prevented because of the presence of the chromium during the dyeing, preventing the other metals from reacting with the dyestuff.

Iron can easily enter the dyeing by means of the water or chemicals (such as impure Glauber's salt) used; or by rust from the steam, steam pipes, or bodies of cast iron machine. Some dyes like Frio Chrome Verdone A (Colour Index 292) are sensitive to as little as ½ part per million of iron in the dyebath; others like Omega Chrome Blue Black R (Colour Index 202) turn brown when 2 ppm are present, and many others are subject to dulling of the shade.

Those colors which produce a different shade when dyed in the presence of iron are also less fast to light, fulling, decatizing, perspiration and carbonizing. In the latter case, the acid leaches out the soluble iron complexes, resulting in a great shade change. Prevention of this reaction by the use a sequestering agents, such as phosphates or some of the newer organic agents, is not nearly as effective as the simple use of chrome in the neutral metachrome method.

The dyes selected for this method of dyeing are put on near the neutral point in the presence of the chromate (not the bichromate) of soda or potash and with buffering ammonium salts, the pH of which changes the dyebath from 7.5 to 1 to 1.5 points lower at the end—near 6.0 to 6.4.

Ammonium sulphate is the buffer generally used; however, some dyers favor ammonium acetate which can be made by mixing ¾ pints of ammonia (26 Be) diluted with water and 2½ pints of acetic acid (28%) for every pound of the acetate desired.

More recently, mono-ammonium phosphate has been used with favorable results. A mixture of one part of sodium chromate and two parts of ammonium sulphate is sold under the name of Metachrome Mordant, and this is also widely used with excellent results.

Generally, one-third as much Metachrome Mordant as dyestuff, but never less than 2% or over 6%, is recommended, with the addition of 2 to 4% of the ammonium salt as desired. These are added to the dyebath at 125 F, circulated, the well dissolved dyestuff added, and the temperature slowly raised to the boil, stopping 15 to 20 minutes at the critical temperature so that exhaust will not be too rapid. After boiling 60 to 90 minutes, a small amount of acetic acid may be added to more completely exhaust the dyestuff; or all these chemicals may be added at the start; or a modification (resembling the top chrome method) may be employed whereby the dyeing is done first, and after 20 minutes at the boil the Metachrome Mordant is added to the dyebath, cooled to 170 F, and brought to a boil again.

Recently, additional modifications have been developed to provide better exhaust and fastness of color. The dyebath is prepared as previously described, except that a little ammonia is added to bring the pH to 7.5 to 8.0; also, 4% magnesium sulphate is utilized. Under these conditions, the magnesium complex is first formed and makes the final chromation smoother and more complete.

The addition of a special surface active agent further aids by speeding the exhaust and the making of the dye complex.

Finally, two proprietary salts have been marketed which contain the best features of this new mordant method and the surface active agent. Advantages claimed

Pittsburgh

Color Dynamics

makes textile plants more efficient more pleasant and safer for employees!

FREE!...Color Dynamics Engineering Study of Your Plant!

IMPROVED production . . . better morale . . . reduced accident risks . . . fewer housekeeping problems.

These are the benefits to management and workers alike resulting from the use of Pittsburgh's scientific painting system of COLOR DYNAMICS in a number of plants of the textile industry.

● **Typical of these results** are the benefits which have resulted from the repainting of the plant of the Lily Mills Company of Shelby, N. C.

Building and equipment were "color engineered" according to the principles of COLOR DYNAMICS which are based upon the physical, nervous and mental reactions of human beings to the *energy in color.*

By the use of proper *focal* and *eye-rest* colors on machinery the worker does his job better. Eye fatigue is reduced. The use of *morale-building* colors on walls and ceilings improves his mental attitude towards his task. *Safety* colors on operating controls and hazard areas reduce danger of accidents. Housekeeping problems are simplified because of the greater pride the worker takes in his more attractive surroundings.

● **Why not try COLOR DYNAMICS** in your plant—on a machine or two, or in one department? We'll be glad to make a scientific color engineering study for you FREE and without obligation.

There's a color expert at each of our offices located in all principal cities. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have our COLOR DYNAMICS representative see you at your convenience. Or send this coupon.

SEND FOR A FREE COPY OF THIS BOOK!

Pittsburgh Plate Glass Co.,
Paint Division,
Department TI-80,
Pittsburgh 22, Pa.

☐ Please send me a FREE copy of your Booklet *"Color Dynamics In Industry."*

☐ Please have your representative call for a Color Dynamics Survey of our properties without obligation on our part.

Name _____

Street _____

City _____

State _____ *County* _____

PPG

PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

SPECIALISTS IN DEXTRINIZATION AND BLENDING OF TAPIOCA, POTATO, CORN AND ALL STARCH PRODUCTS....
How to Get the ONE BEST Dextrine or Starch Product!

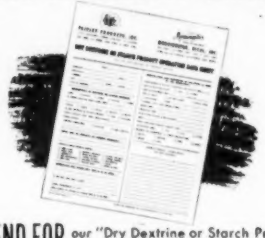
ONE OF SIX MORNINGSTAR LABORATORIES

MORNINGSTAR has developed Textile Dextrine and Starch Products to the highest known standards of performance! Skilled chemists, thru years of continuous research, have achieved a degree of uniform excellence in *all* Morningstar Dextrine and Starch Products, unapproached in the history of the industry.

Modern, scientific laboratory facilities and techniques have been established not only to *improve* but to maintain absolute *control* of quality. Now you can depend upon each succeeding shipment containing the same, fine uniform characteristics. Don't guess. Don't take chances on the Dextrines you use. Morningstar *Scientific* Dextrine and Starch Product Service can give you valuable aid. Tell us about your needs. Let our laboratory staff determine the one best formula for your specific requirements. Call our nearest field man or write us today.

The PAISLEY PRODUCTS Division of Morningstar, Nicol, Inc. is prepared to give you quick, efficient service on all Morningstar products. *Consult your telephone red book.* PAISLEY maintains sales and service organizations in most principal cities.

FREE CONSULTING SERVICE!



SEND FOR our "Dry Dextrine or Starch Product Operation Data Sheet." *Fill in and return it promptly. Our laboratory staff will gladly study your requirements and promptly recommend the one best and most economical formula to improve the specific operation you describe. This valuable laboratory service does not cost you one penny! Take advantage of it NOW!*

ESTABLISHED 1851
Morningstar
SCIENTIFIC DEXTRINE AND STARCH PRODUCT SERVICE

MORNINGSTAR, NICOL, INC.

630 WEST 51st STREET
NEW YORK 19, NEW YORK

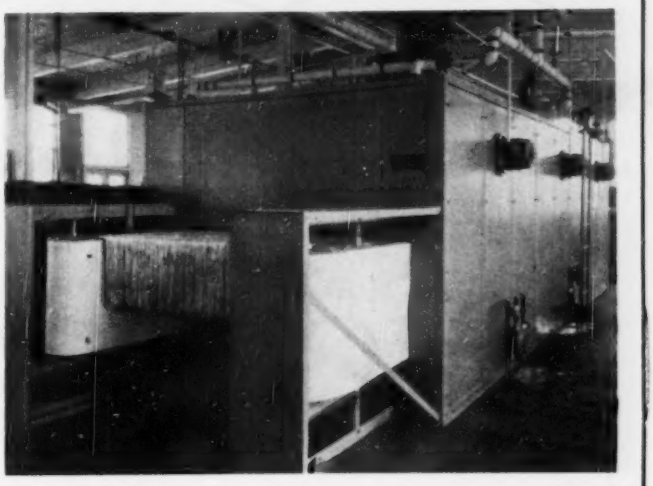
1770 CANALPORT AVENUE
CHICAGO 16, ILLINOIS

Machinery for Drying Dyed Skeins

After skeins of yarn are dyed and drained, they must be dried. One method for drying the skeins involves the use of a truck type dryer which accommodates two trucks, each holding two tiers of poles. Wet skeins are removed from the dyeing machine and hung on the trucks which are in turn placed in the dryer where drying is accomplished by the circulation of hot air.

An automatic skein yarn dryer, shown here, features a traveling skein protector. The wet skeins are hung on poles which are carried through the dryer by a continuous roller chain conveyor. The skein protector permits the loading of the poles to the very ends, thus preventing the heated air from shunting past the bare ends of the poles.

Courtesy, Proctor & Schwartz, Inc.



for these salts are that decomposition and chromation in the dyebath is largely prevented, yielding stronger and faster shades. Even the darker colors can thus be dyed with fastness comparable to the best top chrome method, with better control and in less time, according to reports.

Acid Dyes Containing Chromium. A special class of acid dyes containing combined chromium in their makeup was first marketed by Ciba under the name of "Neolan" colors, and independently by General as "Palatine Fast" dyes, and more recently by other dyestuff manufacturers under their own brand names. They differ from the acid dyes in that more acid is necessary to release the chromium and more boiling is necessary to effect the complex between the wool, the dye, and the metal. These dyes have excellent fastness ratings for light, water, perspiration and sea water; for light milling and scouring (however, some chrome dyes still surpass them).

These qualities recommend the dyes for use on tropical suitings, the better grade of ladies' wear, hosiery and bathing suit yarns, and for carpet yarns where the highest degree of light fastness is desired. The range consists of more than forty dyes and is quite complete.

Dyeings are made without Glauber's salt, using 6 to 8% sulphuric acid. Dyebath is brought to a boil in 30 minutes, and goods are boiled 1½ hours or more. The acid may be added in two portions —half at the start, half after 30 minutes at boil; but these amounts and the time stated are necessary to produce level results and to get the maximum development of shade and fastness. Extra rinses are needed after the dyeing to remove the large amount of acid, and where some cotton or rayon is present, a little ammonia in the rinse water is recommended to offset some tendering during drying.

Auxiliaries are available for use in dyeing with these colors. They are added 15 minutes after the boil and act as leveling agents. The amount of acid may be reduced if these substances are used.

Some of these metallized acid dyes are very level dyeing, especially some of the newer types, and they are sufficiently good to be used as "salting" colors—to be added at the boil for purposes of shading. Their better wash fastness property makes them useful where the usual "leveling" type acid dyes fail. Thus, they find increasing use on shrinkproof wool where more washing can be expected and better wet fastness is desirable.

Being combined with a metal, the dyes are not sensitive to other metals. And while the price is greater than the ordinary run of acid dyes, it is not as great as the price of some of the special types.

(To be continued)

Lab Type Dye Kettle

Designed to meet the need for a stock dye kettle that can handle sample lots of from two to four pounds efficiently, this laboratory type stock dye kettle can be used to dye samples in raw stock, top, skein or package form.

Courtesy, Riggs & Lombard, Inc.

let's stop kidding ourselves on costs

"We have to sell against the production of those new Reading Machines. And that means 15 dozen pairs every eight hours."

• • •

The new "Reading" Machines are producing full-fashioned stockings of superior quality and at higher speeds than ever before possible. Many exclusive "Reading" features give higher precision and greatly simplified control in operation . . . 30 sections . . . 51 and 60 gauge.
TEXTILE MACHINE WORKS • READING, PENNA.

The "READING"
Full-Fashioned Knitting Machine

Operations Recorders

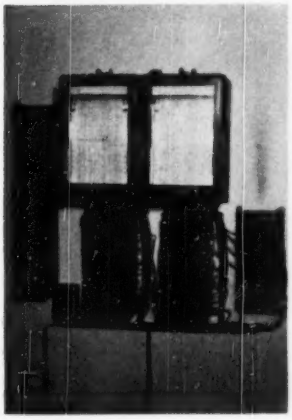
Aid in Analyzing Full-Fashioned Machine Production

WAGES and raw material costs have risen to new peaks, and reduced costs must be realized through more efficient use of manpower in the knitting industry. Esterline-Angus operations recorders are used at Laurens Hosiery Mills, Inc., Laurens, S. C. The instruments supply information which can be used in an accurate analysis of production operations in reducing production costs, and they are of value in analyzing knitter efficiency on full-fashioned machines.

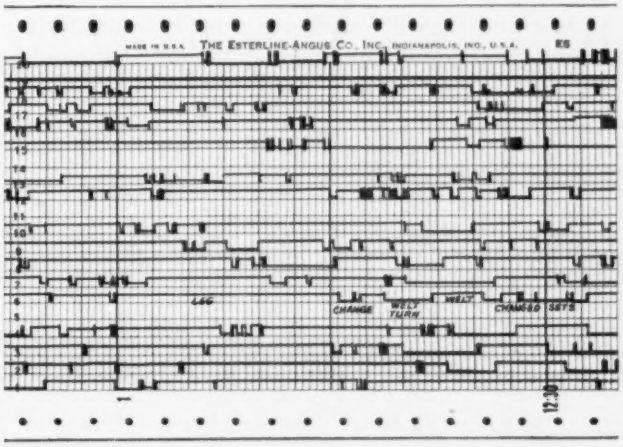
The full-fashioned machines in this plant are of various gauges and types, employing different types of drives, and the recording instruments are used primarily to record operating time of each machine in the plant. Each instrument at Laurens has 20 pens, and the two instruments in use can accommodate 40 machines. The charts supply a graphic record of the quantitative analysis of production, and if customary time studies are made in conjunction with this information, there should be an accurate analysis which could not be obtained by other means.

Staff Prepared

Computing Wages. The records provide evidence to prevent any doubt arising as to how long a machine was stopped for repairs. This information is of value in computing pay for operatives who receive a piece work rate. When a knitting machine is down for repairs through no fault of the operative, he is paid a time rate, and the recorded charts on the instruments prevent any controversy regarding how long the ma-



INSTRUMENTS present neat and compact appearance, mounted on wall in the superintendent's office. Boxes at left are conversion units called "multipliers" for use with late model full-fashioned machine drives which operate on d-c instead of a-c.



NOTATIONS indicate penned record of each operation on the full-fashioned machine. Numbers at left identify pens for each machine. The interval between vertical lines represents ½ minute of lapsed time, but other scales are available. The charts at Laurens travel one foot per hour. Each chart is 103 feet long.

Flexibility

It's the way they bend and recover; bend and recover. The proper amount of resiliency is built into every Textile Spring-Beard Needle by means of a special steel formula, superior tempering and scientific controls.

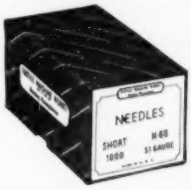
Flexibility is just one of the many advantages you receive when you buy Textile Spring-Beard Needles. Rigid quality controls — automatic and electronic — give you longer-lasting needles, better hosiery fabrics, bigger profits.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full Fashioned and Warp Knitting



chine was inoperative and undergoing repairs. The charts are sent to the firm's central office where they serve as records to be analyzed by planimeter method as a check on operating efficiency in the mill.

The knitting cycle can be observed from the charts, provided the machine is not inoperative for repairs. Records from the instruments are used primarily to determine knitter efficiency in this mill. Down time for turning welts is important, and differences in downtime from one machine to another (except for repairs) indicate knitter efficiency. The machines are considered 100% efficient, except for breakdowns and the time required to make style changes.

INFORMATION PROVIDED BY OPERATIONS RECORDING INSTRUMENT CHARTS

1. **Frequency of stoppage per hour or any other desired period of time.**
2. **Duration of time for each stoppage.**
3. **Operator efficiency on any recorded machine for any time period.**
4. **Comparison of operator performance on similar machines.**
5. **Comparison of performance of similar machines.**
6. **Variation in operations on each shift.**
7. **Readily available records for immediate investigation.**
8. **Continuous records at minimum expense.**

Correcting Inefficiencies. The corrective measures necessary for knitter inefficiencies can be determined best by observing the knitter in action on the machine, but the recording instruments supply charts of considerable value in making a time and motion study. The plant manager knows from observation approximately what the efficiency of each machine should be, and the knitting cycle on each machine can be analyzed to determine which knitter should improve various operations.

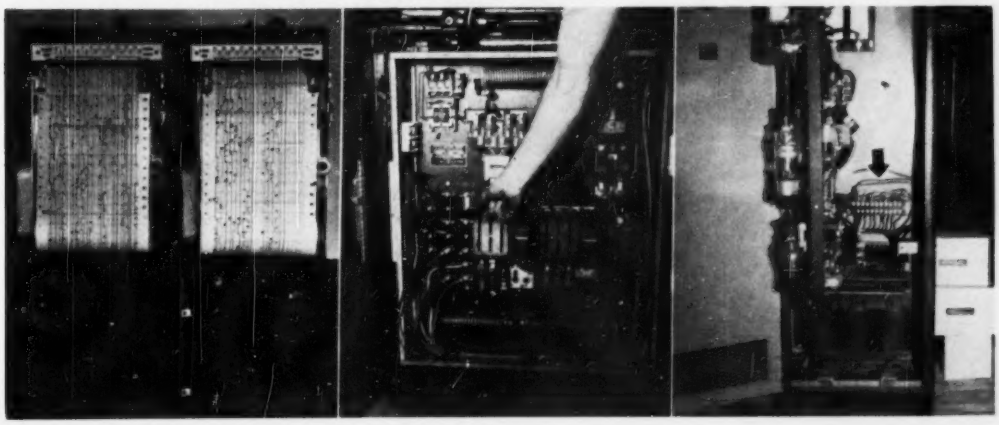
Upon examining one of the production charts, a noticeable factor is the variation from machine to machine producing the same style and gauge of hosiery.

In addition to immediate benefits in operating the mill, the instruments provide a permanent and valuable record of operations in the various plants among a group of mills managed by one firm. The activity of knitting machines is more effectively shown by graphs than by figures, and an account of operations is available at all times on a continuous basis.

One advantage of operations recorders is in providing a continuous indication of production in the mill, should the superintendent or manager be tied up with business in the office where the instruments are located. At a glance, the superintendent can tell which machines are running and which ones are not running. Further, when walking through the plant, the superintendent may observe a machine out of action. A quick check on the charts will indicate how long the machine has been inoperative.

The major benefits derived from the use of operations recorders at Laurens as stated by the

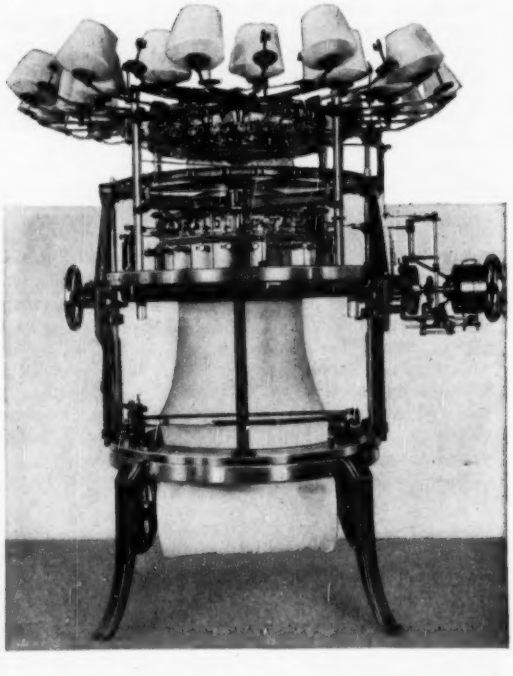
CHARTS in position on the recording instruments (left). The position and mark of the pens indicates the activity of every full-fashioned machine in this plant. Center, fixer points to two wires connecting the recording instruments to the drive on a 51-gauge Reading machine operating on 220 volts a-c. Right, arrow points to connections in automatic control panel of new Reading 60-gauge machine equipped with General Electric "Thymotrol" drive.



We could proudly point—

. . . to the unusual quality and excellent production assured with this Knitting Machine: **But**

We'll just show you this picture of the



WILDMAN 30" INTERLOCK MACHINE

FOR
SPORTSWEAR
UNDERWEAR
DRESS FABRICS
OUTERWEAR

You decide for yourself if it's worth getting ALL THE FACTS, *Now*, about this KNITTING MACHINE to maintain top production efficiency for many, many years . . . Popular sizes 26" and 30". Also other sizes from 15" up. Furnished in all cuts up to 24 needles per inch.

WILDMAN MFG. CO., NORRISTOWN, PA.

management are as follows:

1. An aid in determining knitter efficiency.

2. Supplies complete record of mill operations on a 24-hr basis.

3. Serves to supply information to the home office.

New 60-gauge Reading machines at Laurens operate on d-c, utilizing 'Thymotrol" (General Electric) drive for precise control of speeds. The instruments in use prior to installation of the 60-gauge machines were operating on a-c, and two "multipliers" were added to permit operating the instruments connected to the new 60-gauge machines. Two wires are required to connect the instruments to the drive mechanism on each knitting machine.

Device Realigns Brush Rings on Leighton Knitter

Prevents imperfections due to improper brushing

EXCLUSIVE

Staff Prepared

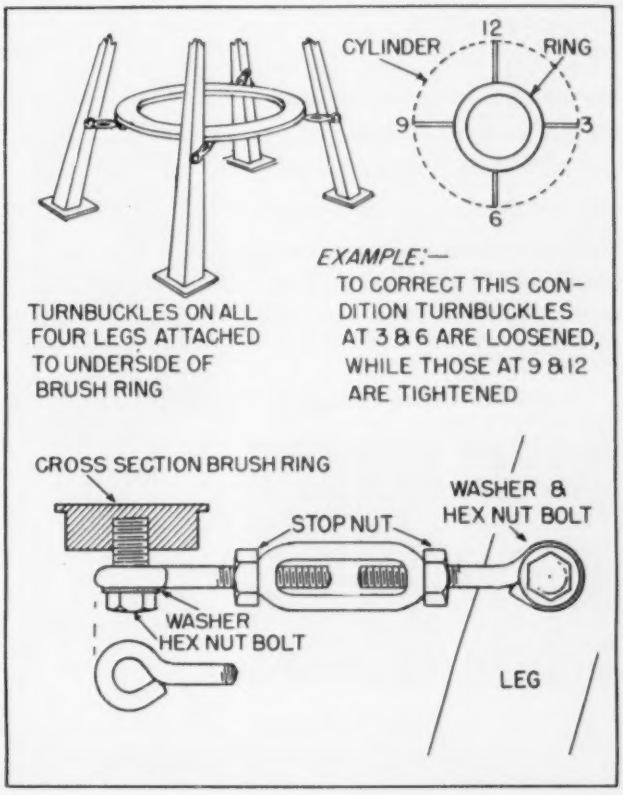
BRUSH rings of Leighton knitting machines are easily brought into circular alignment with the cloth by means of a simple realignment device perfected at Max Lowenthal and Sons knitting mills in Rochester, N. Y.

Brush rings of the Leighton frame may lose their relative cylinder position upon "springing" due to accidental jarring during overhauls, maintenance, or relocating. Ordinarily, there is no provision on the Leighton to realign the brush ring. The distortion prevents uniform 360° brushing, thereby causing imperfections in the knit goods.

Consisting of a 5-inch turnbuckle fastened to each of the frame's four legs, the device connects with the brush ring and permits a perfectly concentric setting of the brush and cloth.

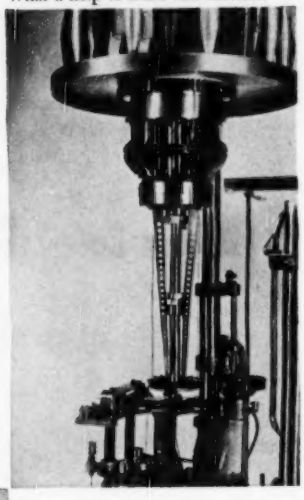
To adjust the setting, the stop nuts of a pair of diametrically opposed turnbuckles are loosened and the turnbuckles are rotated in the direction required to produce an even setting on both sides of the fabric. Turnbuckles are rotated alternatively until this setting is attained.

The second pair of turnbuckles is then regulated similarly. Settings are rechecked and refinements made by turning the desired turnbuckles slightly. Stop nuts are then tightened.



Location and details of turnbuckle adjustment for brushes on circular knitting machines.

A special wrapping mechanism has been designed for this machine. Entire wrap head lifts out of upper cylinder, swings to side and down for instantaneous re-threading and pattern changes—What a help to fixers and knitters!



the Scott & Williams

Komet Wrap Machine

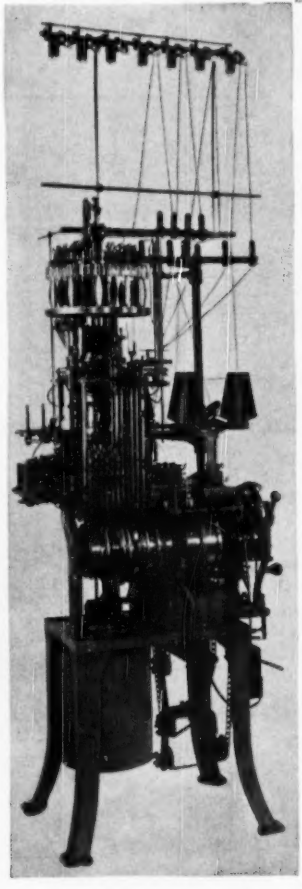
MEANS BUSINESS

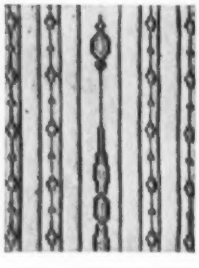
new and profitable business for your mill

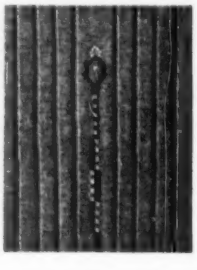
This new machine not only brings in new orders and expands your hosiery markets—it pays off quickly in fast and economical production.

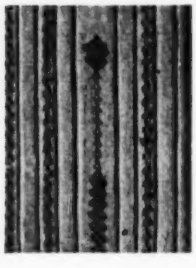
It produces Komet Broad Rib half-hose and slacks with an endless variety of embroidered clocks and wrapped patterns—all in a *single knitting operation!*

No need for slow and costly hand embroidering or Swiss clocking machines. Knitting and embroidery are a single automatic operation, costing only a few cents per dozen.









S·W

SCOTT & WILLIAMS, INC.

Established 1865

Sales Office: Empire State Building, New York 1, N. Y.

Divisional Offices: High Point, N. C., Reading, Pa., Chattanooga, Tenn.

MAIN OFFICE AND PLANTS: LACONIA, NEW HAMPSHIRE

Tool Aids Installation of Lower Cylinder Spring Bands

By ERNEST BRIDGES

PREVIOUS articles have described some special tools which were specially designed by the author. Others were purchased and altered to make them adaptable to some particular use on circular knitting machines.

This article describes a tool which was not designed by the author. In fact the first one of these tools belonged to a tester on the final assembly and test line at the Scott & Williams plant at Laconia, N. H.

Machine fixers, who had the good fortune to spend some time at the factory, are familiar with this simple and useful tool; however many fixers may not know of its existence. The tool was designed for use on Komet and Links & Links machines, but no doubt it may find use on other types of machines.

The tool has no standard name, and its use is limited to a single purpose; namely to simplify the application of lower cylinder spring bands to Komet and Links & Links machines. On many types of machines, where two or three small cylinder spring bands are used, the ends can be joined by making a hook on one end and an eye on the other end.

Only one large lower cylinder spring band is used on Komets, and the hook and eye method would not be satisfactory because a large gap is left where the ends were hooked together. A firm, flexible, and smooth joint of the cylinder bands on Komets is necessary for numerous reasons. A good joint can be secured by using a core and twisting the ends together.

The tool for applying lower cylinder bands with a core in one end is shown in the sketch. Insert the end of the band with the core in the concaved slot of the tool, allowing the open coils and the core to extend and tighten the screw enough to hold the band firmly without crushing it. Thread the band around the cylinder. Then stretch the band an inch or two and reverse twist the end not held by the tool. After twisting the end about eight or ten turns, insert the extended core and twist clockwise until the ends are completely joined, making an endless band and a perfectly smooth joint.

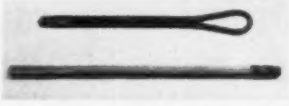
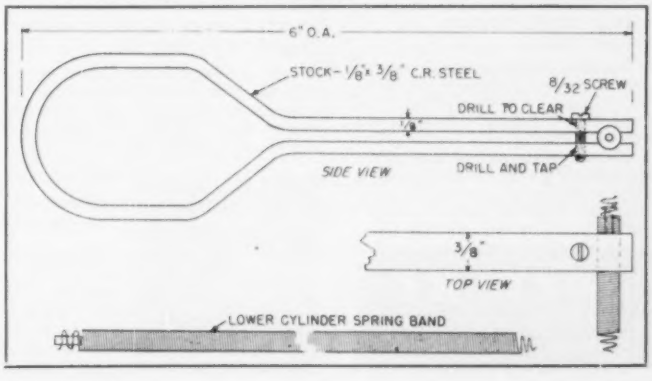


Photo of lower cylinder spring band in jig position. Note pencil below to indicate length.

The need for a tool of this kind is obvious. Without it, two men would be needed to apply a new band; one to hold an end while the other stretched, reverse twisted, and then joined the two ends together. In other words, more than two hands are needed to apply a new cylinder spring band without a tool of some kind.

A hand vise could be used, but we find this simple tool to be exactly what is needed to do the job. Use a piece of flat cold rolled steel 1/8" x 3/8" and band as shown in the illustration. Bands of correct length for various diameters (with cores inserted) can be purchased from the factory. They come ready to apply as is.

Construction details for tool for applying lower cylinder bands.



Knitting News

NEW SUPREME AUTOMATIC STRIPERS FASTEST IN THE WORLD

Knitters Get Tremendous Production Bonus On Pattern Placer Cloth, Variable Stripes, Plaids, Designs And Patterns

In mills throughout the world, Supreme Automatic Variable Stripers are outproducing competitive equipment by far and are achieving new highs in production rates. These faster knitting rates are the result of exclusive Supreme design developments.

STATIONARY HEAD

Supreme's Stripers use a stationary yarn stand and a high speed revolving cylinder and take-up. This permits higher, super-fast knitting speeds coupled with trouble-free operation. "Pigtail" double tie-ups of yarn cones can be made and each cone used down to the very end.

NEW INGENIOUS, AUTOMATIC STRIPING SYSTEM

Embodied in the Supreme Striper line is a patented and concealed camming method for changing colors of the yarn in the striping feeds. This new method is an entirely new concept in selective striping equipment. A simple, short chain will give any type of horizontal stripe selection desired and will also control the point at which jersey fabrics will be knitted. The chain consists of only a few types of links which count each revolution of the machine and institute changes.

NO-WASTE CUTTERS MINIMIZE FINISHING COSTS

An exclusive Supreme feature available on all Stripers is the new "Synchronized Cutters" which eliminate all waste when changing colors. At the correct instant, the yarn that is going out of action is clipped off close to the narrow seam. It is then held in a unique clamping device along with the other yarns, each ready to go back into action the moment the pattern calls for it.

SUPREME
KNITTING MACHINE CO., INC.
101 JOHNSON AVE. BROOKLYN 6, NEW YORK, N. Y.

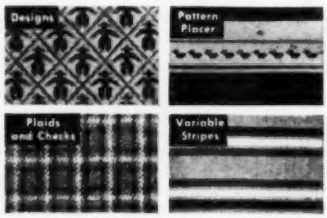
Supreme Automatic Stripers Out-Knit Competition For Stinson Knitting Mills, Inc., Brooklyn, N. Y.

SUPREME STRIPER LINE GIVES KNITTERS "SWITCHABILITY" TO MEET SHIFTING DEMANDS

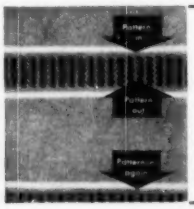
Supreme Stripers equipped with Automatic Pattern Placers knit a tremendous variety of fabrics such as, plaids, checks, designs, variable stripes or Pattern Placer Cloth. This varied production can all be done on one multi-purpose machine, giving the knitter extraordinary versatility. He can switch from one type of fabric to another whenever the market demands.

INDIVIDUAL PURPOSE MACHINES READILY ADAPTED TO MULTIPLE-USE

Where the knitter plans to produce only one type of cloth he may find the purchase of a single purpose Supreme striper more economical. Supreme's engineering design makes it possible for the knitter to adapt these individual purpose machines to multi-use production. This can be done by the knitter at any time he desires, right on the spot in his own mill.

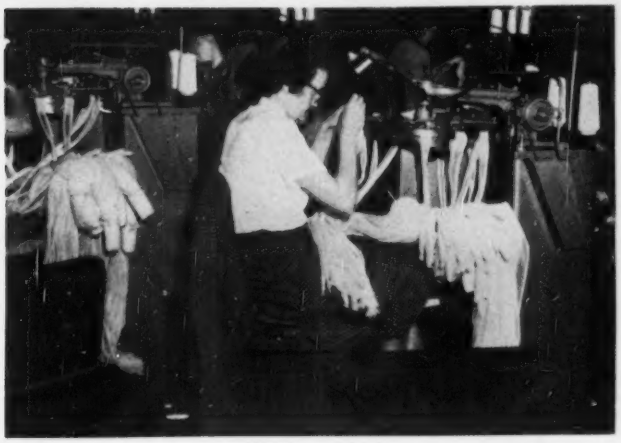


SK-131



AVAILABLE ON SUPREME'S STRIPER LINE — INDIVIDUALLY OR SIMULTANEOUSLY CONTROLLED PATTERN PLACERS

This new device enables the knitter to place a pattern wherever he wants in plain or striped jersey cloth. Now available; Individually or simultaneously controlled Pattern Placers on all feeds make possible more versatile patterning, larger pattern areas, more production and more unusual fabrics.



Hosiery Operations Improve with

Pedestal Mounted Loopers and Seamers

Permit quick, easy changes in machinery layout

EXCLUSIVE

Staff Prepared

A NEW hosiery mill in Independence, Virginia, has found that pedestal mounted loopers and seamers offer many advantages over the older type of bench mounted equipment.

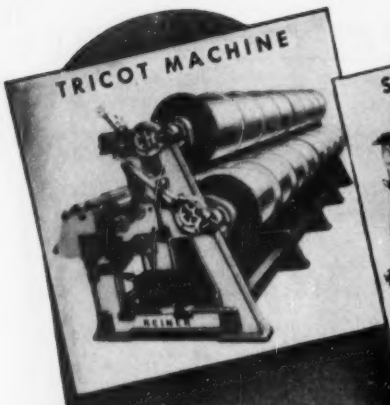
Grayson-Millis Hosiery Mills, manufacturers of 51 gauge nylons, have been in operation only since January of 1950. Going into a well designed new building and training new operators, the management, including H. A. Millis, Jr., general manager, and Ed Rackley, superintendent, were determined to get the best equipment available and set up the simplest and best flow of materials.

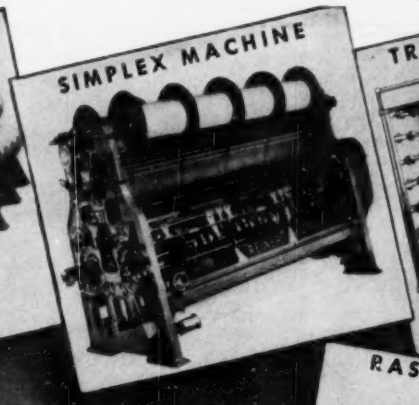
After considerable study they decided that the best design for speed and efficiency in looping and seaming was to be found in machines of the pedestal type. Each of these machines is separately mounted and may be shifted from place to place in the plant at will.

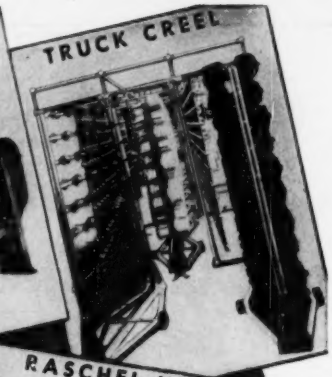
Grayson-Millis now has six loopers and twelve seamers, the pedestal type loopers being placed in one row and the seamers in two rows in front of them. Each looper operator serves the two seamers straight ahead. The machines are turned at an angle in their rows so that each operator faces away from the operator next to her. With this arrangement there is less temptation to carry on conversation or watch the adjacent operator's work. Furthermore, the machines are mounted far enough apart so that conversation is actually difficult.

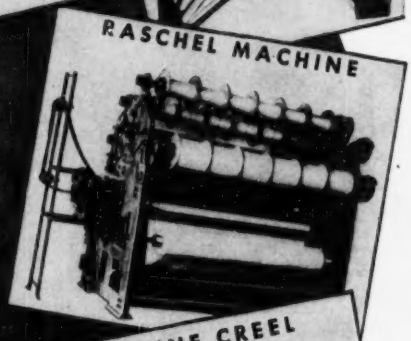
Currently, Grayson - Millis is using canvas trays to hold the hose at each operation and the same trays are used to move them from looper to seamer and from seamer to inspector. This assures a close check on goods so that there is no trouble in an operator knowing which is her lot from looper through to inspection.

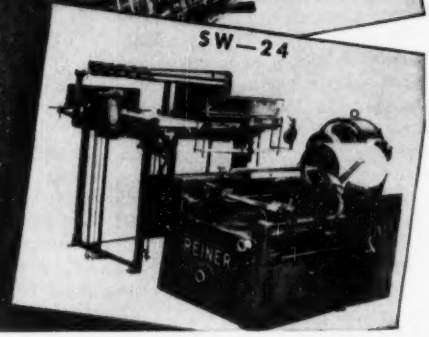
The management is not sure that this basket method of handling is the best or final answer. It is working well now because the operators are new and inexperienced, and their work load is not established. Using baskets gives considerable flexibility to the system, for if the seamers get ahead of their looper while other loopers are behind, it is possible for trays to be transferred from the line that is behind to the line











For Your WARP KNIT NEEDS—

. . . Check this list for the efficient Reiner machines to keep your products in the front rank of progress today and tomorrow.

- Tricot Machines—2 and 3 bar, 108" and 144" wide.
- Looplooms.
- Raschel Machines.
- Simplex Machines—double knit.
- Warping Machines—sectional and full beam.
- Magazine Creels.
- Single Type Creels.
- Truck Creels.
- Skimmer Racks.
- Thread Tensions—counterbalanced and disc.
- Beam Loading Wagons.
- Hydraulic Beam Lift Wagons.
- Stop Motions—electrical and mechanical.

Replacement parts of all Reiner machines are always available.

. . . . Then ask for informative catalogs, with full facts, lucidly presented and elaborately illustrated.

FOUNDED IN 1903

ROBERT REINER INC.

550-564 GREGORY AVENUE
WEEHAWKEN, NEW JERSEY

10 MINUTES FROM TIMES SQUARE. Take Bus Nos. 61, 67, 167 from the Times Square Public Service Terminal at 260 West 42nd Street, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-2217.

that is ahead.

On the other hand, once the operators are experienced so that their output is consistent, a new system may be used. This would involve the use of one looping machine and three seaming machines arranged in a circle. Inside the circle would be an inspection table. This group would make up a complete unit, and no baskets would be needed for handling. Each seamer would have a special rack placed between her and her looper, and as a pair of hose is looped, it would be hung on one of the racks to be picked up by the seamer without further handling. From the seamer, the hose would be handed directly to the inspector.

The management at Grayson-Millis feels that this method may turn out to be the most efficient of all, but they are waiting until they are more experienced before discarding the basket handling method. They estimate that properly operated, the systems made possible by the use of pedestal machines can save 10% to 15% in looping and seaming time.

Also, with separate machines, a motor failure or other mechanical trouble stops only one operator instead of a whole table. Then, too, the machines can be placed anywhere there is an electrical outlet. This is important to a new firm such as Grayson-Millis, for they are already planning the addition of new knitting machines to go along with the eight Reading, 51 gauge, 30 section machines they now operate. Set up as they are, it will be a simple matter to add more loopers and seamers without disrupting the flow of materials.

Knitter Hints No. 33

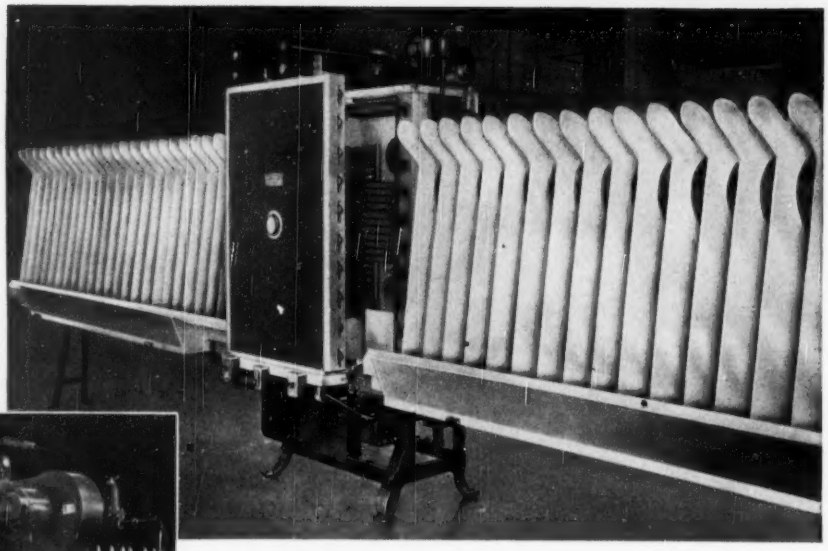
Pull Threads at Mending Operation

A most interesting conversation—but what about those pull threads you're making?

DON'T EVER SIT ON HOSIERY!!

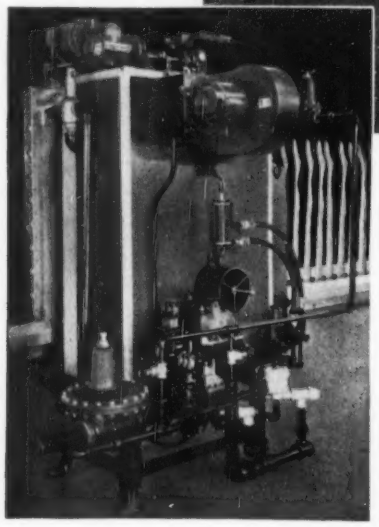
This Knitter Hint appears through the cooperation of Charles O. Simms.

TURBO announces the AD-48



Look inside the chamber of this new Turbo AD-48. See the steam coils which maintain a steady temperature during finish boarding. Note the air intake at the upper rear and the vent at lower rear of chamber—both are sealed automatically during preboarding.

Below: Rear view of machine showing fan, air vent and pressure reducing valve.



Turbo has done it again. It's the Turbo AD-48, a new dual-purpose machine for preboarding and finish boarding. Assures static-free stockings perfectly finished by using heated air to keep temperatures steady during finish boarding. It's fast, quiet, automatic. Gentle as a lamb with your finest Nylons.

Two groups of 24 forms each. The operator strips or dresses one group of forms while the other is in the chamber. Forms are interchangeable on all Turbo Machines.

The new Turbo AD-48 is now in successful operation. See the AD-48 before you buy—it's designed to cut your costs and increase your production. Write us today.

TURBO MACHINE COMPANY, LANSDALE, PA.

Southern Representative: F. W. Warrington Co., Charlotte, N. C.

Fall Credit Outlook an Enigma to Many

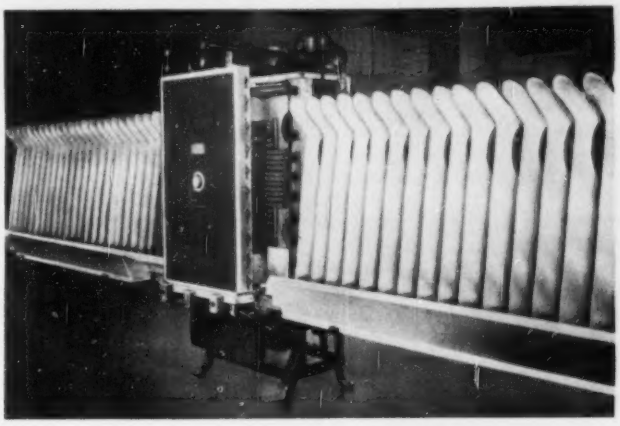
At midyear the average credit grantor in the knitwear and allied lines can be expected to have obtained a fairly good line on what to expect in the way of collections during the latter part of the third quarter. By making a number of necessary adjustments, he normally can be in position to forecast the status of customers' credit from late September until the end of the year.

Knitters and their suppliers of manufacturing materials have credit problems right along, it is admitted, but these become more serious with wholesale handlers of finished goods, and even more so among retail outfits doing large volume business, whose sales have to rely more or less on granting liberal accommodations to the general public.

Entering the third 1950 quarter, it is said, the credit status of the average retail customer seems a lot less stabilized than it was six months ago. Various shifts have taken place since end of 1949, in the relative positions of some industries, which in the aggregate employ a great many people. Since last winter, in some of these groups enrollment of employees has been reduced materially.

Beyond this, many employees have lately been reduced from part-time employment to no work at all. For a time, unemployed factory help receive unemployment compensation, but when this has been exhausted, buying power in the retail market drops to zero for workless folks. Some non-durable lines have been affected by this trend in a few durable industries. Their own employees have been comfortably busy, but demand for the end-products has been sagging gradually, because many customers now are not so well placed.

Credit grantors in the knitwear and related lines take all this into account, and at midyear they decline to hazard an opinion as to the credit outlook. The best they can do on the optimistic side is to label some accounts "doubtful." It is to be expected more accounts will warrant this designation before Labor Day.



DUAL PURPOSE BOARDING MACHINE

This new dual purpose machine for preboarding and finish boarding hosiery is the Turbo AD-48 as described on page 139 of the July 1950 issue of TEXTILE INDUSTRIES.

Steam coils inside the chamber maintain a steady temperature during finish boarding. Air intake at upper rear and vent at lower rear of chamber are both sealed automatically during preboarding.

Turbo Machine Co., Lansdale, Penna.

For additional data, request item H-202, using business reply card on page 192.

Stop Motion Device Improves Safety

EVIDENT in the knitting industry are benefits derived from a safety device which stops the knitting machine when the electric current fails.

Trouble. Heretofore, a machine would continue to run even though the stop motion plug was kicked loose or pulled out, or a fuse blown, or a wall switch inadvertently turned off. Sometimes a transformer burns out, or the input line gets broken and the machine would continue to operate until a smash-up occurred. The knitter had no means of knowing that anything was wrong until after the machine smashed.

Remedy. In mill operation, the "Safety Controller" eliminates the forementioned failures. With this unit, should controller input current fail, even for a second, the machine will stop. If a battery of machines is connected to a line and the line fuse blows out, every single machine on that line will be brought to a stop immediately. Likewise, if anything goes wrong with the input current on any individual machine, it will stop. Further, the machine cannot be started until current is restored.

The equipment is manufactured by Stop-Motion Devices Corp., 1471 Fulton St., Brooklyn, N. Y.

Stronger Markets for Underwear

Buyers' interest in summer weight items and fall heavyweights is reported by outstanding distributors in the underwear field. Around the end of June, a spurt commenced in fill-ins and replacement buying of lightweight numbers.

It was commented that this again demonstrated how closely the underwear business is linked with weather conditions. In some localities during May there were very few bright, warm shopping days. When one occurred, the stores were swamped with customers.

This was the case in such large centers as Chicago, New York, Philadelphia, Cincinnati, etc. Conversely, in the Southwest where warm bright days commenced on regular schedule in early spring, retail sales of consumer goods hit their seasonal stride in April, and retailers reported May and June were satisfactory selling months.

In the northern half of the country, almost from coast to coast, seasonable temperatures were unduly delayed and there were frequent showers. Therefore, many stores reported losses in dollar-sales comparisons made with the like 1949 weeks; this, in turn, led them to somewhat curtail their usual spring buying.

Knitters' orders already on the books, however, had begun to show some gains when contrasted with the year before. The customary relationship between stocks and orders of distributors and the unfilled orders of the knitwear mills has not yet been restored. Assuming that the improvement now reported is likely to continue, it can be expected that retailers will still require some weeks of more active disposal before their inventories have become completely depleted. Therefore, the manufacturers should commence to reap their seasonal harvest of active demand at fair prices, it is claimed.

As previously noted, most of the larger retail outlets now try to regulate much of their buying to accord with what they figure from weekly sales reports, as against the quotas arbitrarily set up in advance for their various departments. At midyear, some retail controllers still remained convinced that inventories should be held in check.

AKOM KNITWEAR GETS 100TH SANFORLAN LICENSE

At a brief signing ceremony in the offices of Cluett, Peabody & Co., Inc., Harder Smith (center) president of Akom Knitwear, received the 100th Sanforlan trademark license. Robert M. Dowling (right), vice-president of the Sanforlan Division, Cluett, Peabody & Co., Inc., described the event as "an indication of the woolen industry's acceptance of washable merchandise that won't shrink out of fit." C. B. Yager (left), market sales manager, Sanforized Division; Cluett, Peabody, assisted in the ceremony. Akom Knitwear is one of the nation's largest manufacturers and distributors of men's knitted sportswear.

Natural Fibers Remain Vital

Enterprise and ingenuity are agreed by all knitwear authorities to have elevated synthetic materials to a place in this industry that makes them eminent competitors against manufacturing materials spun, woven, knitted and otherwise processed from the natural fibers. This invasion of synthetics also embraces the field of industrial uses of textile products.

One of the first sectors to show the results has been the sale cotton yarn trade, it is cited by market leaders. It is conceded that cotton staple no longer commands the patronage it once did among industrial users of yarn. To a less degree, but still having importance, are some types of knitted products that long have entered into further manufacturing processes in some lines.

During the war, certain kinds

What's a "special feature" worth — if the stocking isn't perfectly knitted!

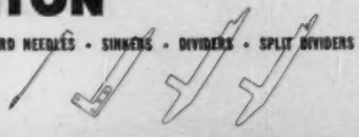
A special construction feature can be a potent selling force. But its power soon fades if it isn't supported by flawless knitting. Safeguard your quality and your sales with precision-made Torrington Needles.

THE TORRINGTON COMPANY, Torrington, Conn., U. S. A.
Established 1866

Branches: New York • Philadelphia • Chicago • Greensboro, N. C. • Boston • St. Louis
Toronto, Canada • *Pacific Coast Representative:* E. C. Paules, 1762 West Vernon Ave., Los Angeles 37, California. Broadgate House, 7-10 Eldon Street, London E. C. 2, England.

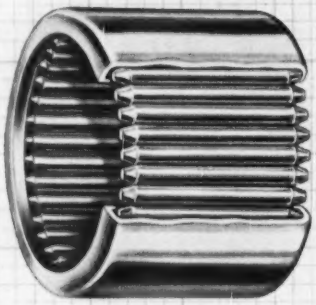
TORRINGTON

SPRING BEARD NEEDLES • SINKERS • DIVIDERS • SPLIT DIVIDERS



save money with

TORRINGTON NEEDLE BEARINGS



You can save in first cost—Needle Bearings are only slightly more expensive than plain bearings and cost much less than conventional ball or roller bearings.

You can save in design — only three elements are needed, a plain bore housing, a hardened and ground shaft and the Needle Bearing.

You can save in machining — housings are straight-through without shoulders or grooves.

You can save in assembly—a simple arbor press operation seats the bearing by press fit.

Secure these savings *now* by asking a Torrington engineer to help you adapt anti-friction Needle Bearings to your products.

THE TORRINGTON COMPANY

Torrington, Conn. • South Bend 21, Ind.

District Offices and Distributors in Principal Cities of United States and Canada

TORRINGTON *NEEDLE* BEARINGS

NEEDLE • SPHERICAL ROLLER • TAPERED ROLLER • STRAIGHT ROLLER • BALL • NEEDLE ROLLERS

of yarn having specific qualities were specified by the armed forces to meet the needs of military and naval operations in the tropics, for example, and this gave rise to many new experiences for makers of synthetic fibers. One outcome was that yarns that were successful in meeting wartime tests were available for peacetime adaptation, which led directly to some of the numerous man-made yarns and fabrics that have been offered as novelties in the textile-garment field.

In the absence of another national emergency, it is now thought the growth of this experimentation will be slower, and for some time to come the natural fibers will persist as the chief sources of manufacturing materials for most industrial purposes. Present conditions and the outlook for industrial textiles, it is stated, are generally satisfactory when compared with the period immediately preceding the war. Yarns spun from raw cotton entirely, are still more extensively used than any other types.

Technological progress among the synthetic varieties has lately begun to concentrate in getting down their costs and selling prices; but the spinners of natural fibers also have invested many millions of dollars in new and improved machinery, which now is mostly in operation, and when and if synthetic competition becomes stiffer, the cotton spinners expect to be able to show some price advantages of their own.

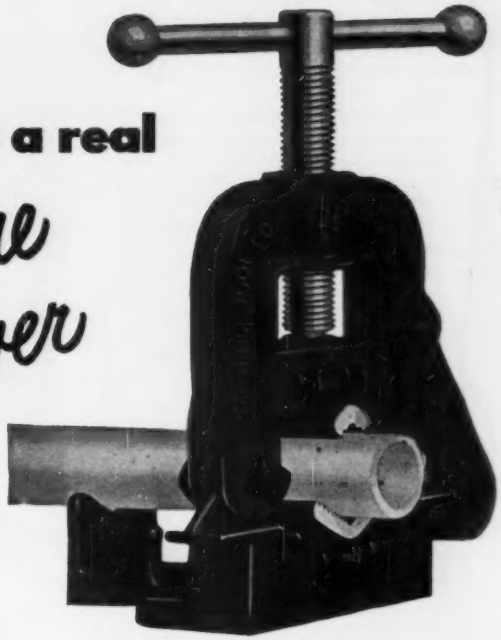
Automatic Trimming Machines

Two new "Trim-Master" automatic trimming machines are available and in production. Both feature "customized nose pieces" for specific operations.

"Trim-Master" Junior, said to be the least expensive permanent trimming unit in the line, fills the demand of manufacturers with cramped space or small trimming operations, for high speed eco-

BENCH YOKE VISE

that's a real Time Saver



. . ."I don't have to worry about protecting polished pipe in these RIDGID LonGrip Vise jaws."

LonGrip Jaws Protect Polished Pipe in RIDGID Vises

● You get years of trouble-free service with this more-for-your-money RIDGID Bench Yoke Vise. You like its easier-work features—integral pipe rest, handy bender that won't flatten pipe and LonGrip jaws that protect polished pipe. Special malleable frame and heat-treated tool-steel jaws for maximum wear. Made in 8 sizes, for pipe to 6." RIDGID bench, post, stand and Tristand pipe vises, yoke and chain types, all offer you real work-saver advantages. Buy them at your Supply House.

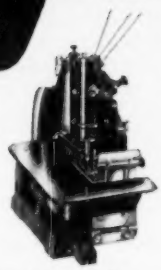
RIDGID
WORK-SAVER PIPE TOOLS
THE RIDGE TOOL CO. • ELYRIA, OHIO

Leading the way to Efficient Production!

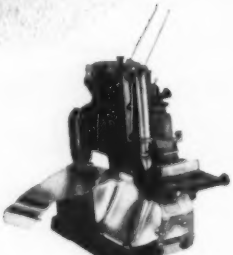
EFFICIENCY in production doesn't just happen by chance—it's planned from beginning to end! Union Special is a leader in bringing EFFICIENCY into sewing rooms with modern, specially designed sewing machines and with knowledge of how to apply them. Union Special builds a wide variety of industrial sewing machines to perform virtually all sewing operations. To assist in meeting your particular requirements, Union Special maintains up-to-the-minute data on many types of products and the equipment needed for their manufacture. *Take advantage of the service Union Special offers —ask for recommendations!*

Right—Attaching split tube binding and simultaneously inserting tiebands in infants undershirts with Union Special Class 52800 machine.

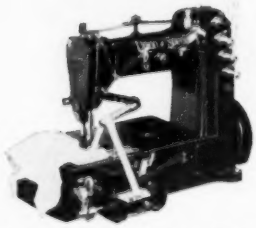
Style 52800 P (left) is designed for attaching split tube borders to necks and armholes of athletic shirts with four thread interlock stitch Type 602.



Style 39200 AC (above) produces the Union Special "Purl-Rite" finish for fine quality seaming of knitted undergarments.



Style 39200 AS (above) is especially designed for blind stitch welting or hemming of knit goods. Cantilever throat plate mounting for tubular work and swing-out cloth plate for flat work. Also can be used for seaming.



Style 52700 M (above) equipped with Union Special's exclusive "Elastic Metering Device" for topstitching elastic to knit panties and similar garments.

HELPFUL BULLETINS. Send for copies of these informative bulletins: No. 254, "Efficient Production of Men's Knit Underwear." No. 255, "Machines for Making Women's Knit Underwear."

Union Special MACHINE COMPANY

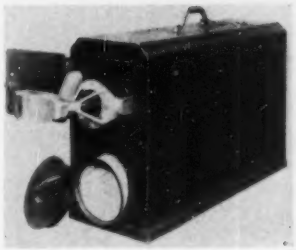
407 NORTH FRANKLIN STREET • CHICAGO 10, ILLINOIS

nomical automatic trimming equipment.

"Trim-Master" Carry-All has been specifically designed for operations requiring automatic trimming in combination with sewing. This handy new unit, weighing 60 pounds and about the size of a two-suiter suitcase, can be set up alongside the sewing machine.

Ginsberg Machine Co., New York, N. Y.

For additional data, request item H-201, using business reply card on page 192.



"Trim-Master" Carry-All (Ginsberg).

Knitwear Novelties Confuse Buyers

Especially in the various branches of vacation apparel, the knitwear manufacturers this season appear to have outdone themselves in the number of new items they have introduced intended to feature ultra-modern adaptations of various types of garments, for which the prices asked are usually rather high, but the producers mostly attach a tag of some sort (such as "Hollywood Model") that is thought likely to attract trade.

Buyers for most of the big-volume retail outlets think of knitwear as only one of several departments they have to buy for. Experienced department store buyers mostly "came up from the ranks." They are likely to try to play safe. A flood of knitwear novelties has the effect of confusing such buyers, it is explained.

In substance, the "big store" technique of selling is projected mostly toward getting volume store traffic and volume sales. Price and appearance, it is stated, remain the main theme among large retail distributing concerns. Once in a while a novelty stands out and is a big seller for a short time. Large retail buyers say they definitely are not interested in any new item that will not produce volume sales.

Some textile apparel manufacturers go in largely for research so as to be able to confront buyers with new items each season. Veteran observers claim that for every such promotion that "clicks" with larger retailers, nine or ten others are never heard of again. This seems to point toward a waste of money among the knitters, when they formulate their lines for a new season. No buyer of any consequence can afford the time and effort required to sift out all the claims made for new types of retail merchandise.

Knitters Buy Yarn Ahead

Average coverage among knitters in their yarn supplies on-hand and ordered was reported in May to range between four and

Knitting and Warp Yarn
4's to 30's
AVONDALE MILLS
SYLACAUGA, ALABAMA
SALES REPRESENTATIVES
COMER-AVONDALE MILLS, INC.
Boston — Chattanooga — Chicago — Charlotte
New York — Philadelphia — Reading

INDUSTRIAL ENGINEERS
Specializing in Textiles for over One-Third of a Century
PAYROLL CONTROLS
WORK LOAD STUDIES
COST SYSTEMS
SPECIAL REPORTS
COST REDUCTION REPORTS
RALPH E. LOPER CO.
GREENVILLE, S. C. FALL RIVER, MASS.

For more than half a century, Manufacturers of Circular Knitting Machines for Underwear, Outerwear, Dress Fabrics, T-Shirts—Polo Shirts, Fancy Rib Hosiery Tops, Knit Gloves, Fancy Knit Gloves.
H. BRINTON COMPANY
Kensington Ave. and M Street
Philadelphia 24, Pa., U. S. A.

WHO'S GOING TO GREENVILLE?

every mill man who can possibly get there will attend the 16th Southern Textile Exposition

Because the Greenville show has always been so important and because it follows two other textile shows in 1950, mill men will give careful attention to every bit of information on it they can get. They must know before they make plans to go, whether it will be worth the time and expense. TEXTILE INDUSTRIES' September issue will meet their need for information.

A comprehensive editorial section is being prepared to tell readers: who will exibit, location of exhibits, what will be shown, who will staff the booths.

Since 1898, TEXTILE INDUSTRIES has consistently campaigned for progress in the textile manufacturing industries. Every opportunity has been used to the fullest to report on new ideas, new products, new machinery and new processes. Every show held by the industry has been fully covered in our editorial pages. The forthright promotion of all possible improvements for the good of the industry has been a vital factor in the steady growth of TEXTILE INDUSTRIES.

TEXTILE INDUSTRIES will publish its Show issue the month before the Southern Textile Machinery Exposition opens. This will give mill men the kind of information they must have to decide that they will go, and when they do, what they will plan to see.

Don't miss the Big September Issue--Start your subscription NOW. 3 years for $4.00

Textile Industries

a W. R. C. Smith Publication • 806 Peachtree St., N. E. • Atlanta 5, Georgia

six weeks. At the end of June it had been stepped up to a range of six to ten weeks.

To some extent, this adjustment is said to have been due to the strength shown by raw cotton quotations; but mostly it was attributed to knitters having depleted their yarn inventories during March, April and May, to the point where they believed replacements should be made.

From the standpoint of yarn spinners and the distributors, the buying by knitters of carded and combed yarns during the weeks between mid-May and end of June was the high spot of the year, so far. Demand was brisk enough to encourage yarn price mark-ups, but evidently these did not proceed far enough to discourage buying.

Prospects for active fall business in the knitwear field have begun to emerge earlier this year than last. The sale yarn business has been encouraged thereby.

At mid-year, spinners had not made known their plans for lifting at least part of the curtailment of spindle operations that went into effect last winter.

Fall Looks Strong to Hosiery Mills

In the hosiery field the knitters have experienced many cross-currents over the last few months, but at midyear it was generally agreed that the firmer trend noted in the markets not only seemed likely to extend further, but seemed to be indirectly connected with stronger conditions in other leading textile apparel lines.

In fact, a few of the well regarded industry spokesmen commenced in May to predict this. Accordingly, some of the larger and more forward looking knitters were reported as having lost their desire to press merchandise stocks for sales as soon as the goods had been finished.

Instead, at least a beginning has been made, it is stated, in the rebuilding of hosiery supplies for future transactions, partly on the

assumption that prices will stabilize still more in the coming weeks. This is simply to repeat what has been successful in different textile lines for a good many weeks back, it is explained.

In some part, and for various reasons indigenous to the type of commodity in question, all these factors have appeared to sum up an expectation of a strong fall season in prospect.

A number of soundly managed hosiery sources lately made known that they expect to make no price changes for fall. Instead, they expect the fall business will come in strongly and will probably start early enough this year to result in a fairly ample selling period.

AN EYE ON THE KNITTING MILLS

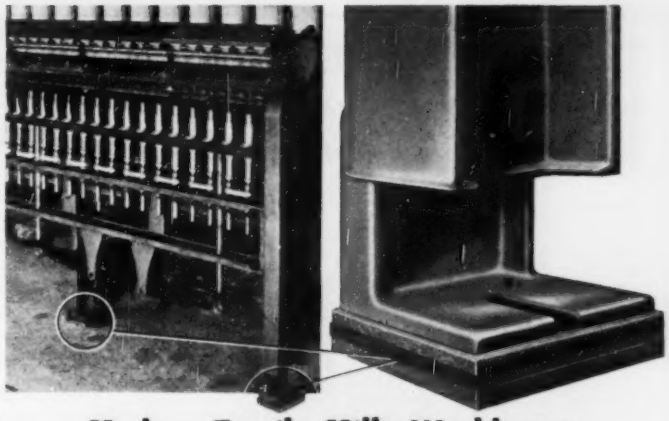
Gainesville (Fla.) Co., recently organized, has acquired property for construction of a one-story knitting mill. Full-fashioned women's hosiery will be produced. The building will have approximately 12,000 square feet of floor space, and is estimated to cost over $350,000.

Maryon Hosiery Mill, Inc., Carrollton, Ga., has acquired a building having over 20,000 square feet of floor space, which will be used for expansion.

About 12,000 square feet of floor space have been leased by **Rainbow Knitting Mills**, Hoboken, N. J., at 6120 Johnson Place, West New York, N. J. The mill will be moved to that location, where production will be expanded and concentrated.

Phillips-Russell Hosiery Mills, Inc., recently chartered, will take over and operate the McArthur Hosiery Mill, Carthage, N. C., men's fancy half-hose. The new company is headed by Paul Russell, N. W. and T. R. Phillips.

Mill property at Denton, N. C., has



Modern Textile Mills World-over Mount Machines on

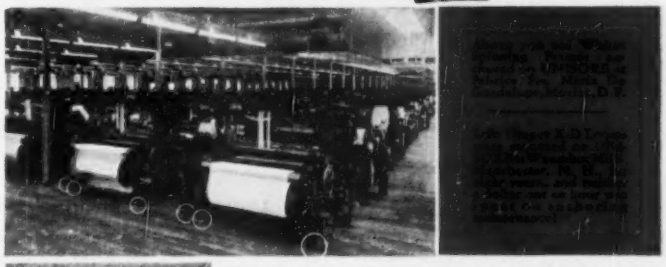
UNISORB®

Save Floors..Cut Costs..Reduce Vibration

UNISORB does away with the destructive floor-drilling that goes with old-fashioned anchoring methods.

Too, UNISORB reduces machine vibration and noise 60-85%...saves floors, machines and buildings... creates a brand new concept of quiet, productive working conditions... and — due to predetermined resiliency factors and scientifically controlled damping qualities — it lasts for years and years with no maintenance!

• DON'T WAIT—ACT NOW!



THE FELTERS COMPANY
210-X SOUTH STREET, BOSTON 11, MASSACHUSETTS
Offices: New York, Philadelphia, Chicago, Detroit, Cleveland, St. Louis
Sales Representative: San Francisco
Southern Representative: Industrial Supply Co., Clinton, S. C.
Southwest Representative: Textile Supply Co., Dallas, Texas
Mills: Johnson City, New York; Millbury, Mass.; Jackson, Mich., New York City
REPRESENTATIVES IN PRINCIPAL CITIES THROUGHOUT THE WORLD

MAIL COUPON FOR FREE BOOKLET TODAY!

Gentlemen: Please send my free copy of "Why It Pays to Anchor Your Textile Machinery with UNISORB." ( )

NAME ..... TITLE .....
COMPANY NAME .....
STREET .....
CITY ..... STATE .....

Established 1838

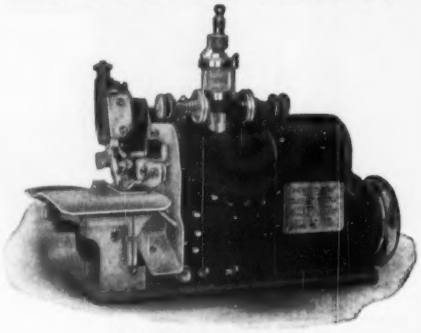
TRADE MARK
MERROW
Reg. U.S. Pat. Off. and Foreign Countries

Incorporated 1894

HIGH SPEED OVEREDGING, OVERSEAMING AND HEMMING MACHINES

FOR USE ON

Knitted and Woven Wear of All Kinds



QUALITY RESULTS
HIGH PRODUCTION
CONVENIENT HANDLING
MINIMUM TIME-OUT FOR ADJUSTMENT OR REPAIR
LOW UPKEEP COSTS

For Best Results Use a Machine Suitably Arranged for Your Work

THE MERROW MACHINE COMPANY
2805 LAUREL STREET HARTFORD 6, CONN., U. S. A.

—Distributors—

HOLLISTER-MORELAND CO., P. O. BOX 721, SPARTANBURG, S. C.

Specify

AMERICAN

For Knitting or Weaving

*AMERICAN DURENE**

Highest Quality Mercerized Yarns

NATURAL YARNS

Combed Peeler or Sak, 10's—90's Single
Combed Peeler or Sak, 10's—100's Ply

Selling Agents for

Efird Manufacturing Company

Knitting Yarns

Combed, 14's—60's Carded, 8's—30's

Thread Division · Lawrenceburg, Kentucky

W. B. SUTTENFIELD, Vice President and Sales Manager

BELMONT (Belly), N. C.	CHATTANOOGA, TENN.	PHILADELPHIA, PA.	CHICAGO, ILLINOIS	NEW YORK, N. Y.
Mr. C. C. Wood	Mr. H. W. Davenport	Mr. Wm. S. Montgomery	Wood & Hutchinson	Mr. M. L. Rhea
Miss E. R. Abernethy	735 Chestnut Street	3701 N. Broad St.	222 W. Adams St.	Room 2900
Mr. T. I. Davis				Empire State Bldg.

HIGH POINT, N. C. Mr. C. I. Holbrook
GASTONIA, N. C. Mr. T. C. Southerness

American Yarn & Processing Company

Mount Holly, North Carolina

KALPINOL

TROUGH SOLUTION FOR KNITTING NYLON

KALPINOLS have been the leading trough solutions for knitting Nylon for years.

Nylon knit through Kalpinol Solutions makes a nice even stitch—even length fabrics—and a fabric which can be easily seamed.

KALPINOL #12 and "L" keep the troughs clean.

Send for our new folder on KALPINOLS which contains a lot of good information.

•

HYDROXY HAND CREAM keeps the operators' hands smooth.

•

K.N.K. (KALI NEEDLE KLEANER) keeps the size off needles, sinkers and bits, preventing distorted stitches.

•

NYLOWASH—used for boiling off Nylon Hosiery. Removes the size and oils, allowing even dyeing.

KALI MANUFACTURING COMPANY
Manufacturing Chemists
427 Moyer St. Philadelphia 25, Pa.

HOFMANN

MODERNIZE YOUR MACHINES WITH

WELT TURNERS

INCREASED PRODUCTION
LESS OPERATIONAL FATIGUE
REDUCED COSTS
BETTER GRADING

WHY NOT INVESTIGATE?

ALFRED HOFMANN PLANTS
WEST NEW YORK, NEW JERSEY

SUPPLIERS TO THE TEXTILE TRADE FOR OVER 25 YEARS

been acquired by **Hoburt Hosiery Corp.**, Philadelphia, Pa., and a branch plant will be operated there.

The recently organized **Shawnee Hosiery Mills, Inc.**, has leased space in the Pruitt Building, Pine Hill, Ala., and will install equipment for production of about 150 dozen pairs of women's hosiery per day. At a later date the company plans to build a one-story building.

Lawrence Knitting Mills, Inc., Bessemer City, N. C., is planning to lease a local one-story building for manufacture of knitting cloth specialties.

In order to double the present output of women's full-fashioned hosiery, **Sanford (N. C.) Hosiery Mills, Inc.**, will make extensions and improvements on its mill, including installation of new knitting machines.

Jacquard Sweater Mills, Inc., Philadelphia, Pa., is anticipating the installation of new knitting machines and other equipment, to provide for increased production.

Roane Hosiery, Inc., Harriman, Tenn., has begun production in a new one-story mill and will specialize in the manufacture of circular knit rayon hosiery for women.

Contract has been let by **Bassett-Walker Knitting Co.**, Bassett, Va., for a one-story addition to its mill, to be equipped for increased capacity. The cost is reported to be approximately $100,000, with equipment.

Construction of a two-million-dollar tricot knitting, dyeing, and finishing plant in Fountain Inn, S. C., to be known as **Fairview Mills**, is expected to start shortly. The structure will comprise 90,000 square feet and will be air-conditioned, with interior walls of glazed tile. Present plans call for employment of approximately 300 persons.

A new addition to the plant of **William Carter Co.**, Needham Heights, Mass., was recently dedicated on the 86th birthday of its president, William H. Carter. The addition consists of a three-story warehouse and service building.

Citation Fabrics Corp. has announced the purchase of a substantial interest in Guilford Mills, Inc., Greensboro, N. C., manufacturers of nylon and acetate rayon tricot fabrics. The mill now has twelve machines running, and twelve more are on order.

The **Full Fashion Hosiery Mills** plant of Burlington Mills, Salem, Va., has let contract for a one-story addition to the plant, which will increase the area by 15,000 square feet.

Associated Hosiery Mills, Inc., has opened a new finishing plant at 426 Market St., Philadelphia, Pa. The new plant is specializing in finishing four stocking constructions: 45-gauge, 15-denier; 45-gauge, 30-denier; 51-gauge, 15-denier, and 51-gauge, 30-denier.

Charter has been issued to **Tahoma Mills, Inc.**, Siler City, N. C., for the manufacture of hosiery. Incorporators of the new firm are R. P. Dixon, L. T. Dark, Jr., and E. S. Bridgers, all of Siler City.

NON-FLUID OIL
TRADE MARK REGISTERED

For Long Draft Spinning

NON-FLUID OIL is the ideal lubricant for rolls and saddles because it does not drip nor leak. The positive lubrication it provides enables top and bottom rolls to maintain correct speed and produce even yarn.

Because NON-FLUID OIL stays in bearings until entirely used up, it outlasts oil, saving on lubricant and application cost. For the same reason, NON-FLUID OIL does not get on top roll covers to blacken yarn.

We are prepared to furnish mills with skilled engineering service. Write for Bulletin T 13 and free testing sample of NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT CO.
292 Madison Avenue, New York 17, New York—Works: Newark, N. J.
Southern Dist. Manager: Falls L. Thomason, Charlotte, N. C.
WAREHOUSES: Atlanta, Ga.—Birmingham, Ala.—Charlotte, N. C.—Columbus, Ga.—Greensboro, N. C.—Greenville, S. C.—Chicago, Ill.—Detroit, Mich.—Providence, R. I.—St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricant, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

Are You Getting a Fair Day's Work for a Fair Day's Pay?

As Production Engineers we specialize in the utilization of
LABOR — EQUIPMENT — MATERIAL

ASK FOR OUR LIST OF SATISFIED CLIENTS—IT READS LIKE THE BLUE BOOK OF AMERICAN MANUFACTURE.

Our work covers millions of spindles and years of experience.

AMERICAN ASSOCIATED CONSULTANTS, INC.

D. S. KEOGH, President
J. J. SKELLY, Vice Pres. and Gen. Mgr.
250 PARK AVENUE
NEW YORK 17, N. Y.

GRANT BUILDING
PITTSBURGH, PA.

H. B. CRAFT, Vice President
in Charge of Southern Operations
30 CAMDEN ROAD
ATLANTA, GA.

Broken Picks?

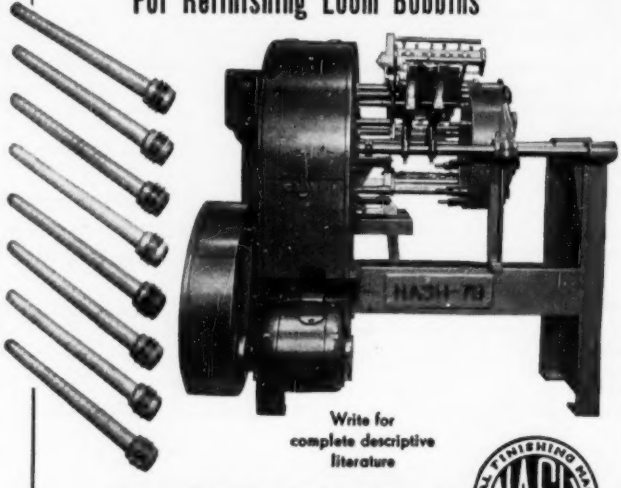
● The reduction of broken picks is one of the features of the Nash No. 79. Running quills through keeps them in perfect condition . . . assures clean, smooth quills at all times, free from sharp surface projections and burnished to a high, dry luster.

No harsh abrasive action is employed during the operation and the original finish coating of the quill remains intact. All dirt is removed from grooves and the resultant polish has a surface free from any deposit. Repeated polishing of quills through the Nash No. 79 will in no way damage the quills or reduce their life.

Write for complete descriptive literature.

We also manufacture Nash 88 and Nash 37 Automatic Refinishers for throwing bobbins.

NASH 79 AUTOMATIC QUILL POLISHER
For Refinishing Loom Bobbins



Write for complete descriptive literature

J. M. NASH COMPANY
DEPT. 79, 2368 N. 30TH STREET, MILWAUKEE 10, WISCONSIN

SPECIAL FINISHING MACHINES · SINCE 1890 · NASH

• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Shorts Cuts • Comments from Readers •

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St. N. E., Atlanta, Ga.

Comments on Grinding Cards

EDITOR TEXTILE INDUSTRIES:

I would like to offer a few comments on grinding cotton cards. In the past several months I have visited quite a number of mills and have paid attention to grinding equipment. I paid particular attention to the various speeds that the mills are using on their grinding equipment. Most of the mills use pulleys ranging from 3½" to 5½" in diameter.

In all my studies of textile literature, I cannot recall ever reading about a set rule for traversing roll speeds. I don't believe card grinding practices are given enough thought to obtain best results. On several different jobs I have had occasion to improve the method of grinding and obtain better results. The object of card grinding is not to wait until the cards become dull before regrinding. The most effective results can be obtained only by properly grinding and setting the cards at the correct or optimum interval.

A smart grinder will not take a chance on bad settings after taking care to properly grind the card. Nor will he allow the card to be out of production for very long after grinding, because there is a danger of dulling the wire by rubbing or contact with grinding rolls, tools, etc. In checking the card, the grinder should start the card slowly and run it in the direction of grinding so he can see whether or not it is rubbing any place. If the cylinder is rubbing flats, plates, etc., the grinder can correct the trouble before the wire is dulled. This procedure eliminates extra grinding in many instances, because in checking, the wire rubs in the same direction in which it was ground.

In preparing the card for grinding, the fillet should be checked for bruised places and mashed wire. If faulty clothing is found, it should be repaired before grinding. Emery fillet on traverse rolls should be in good condition, and it is important to see that the traverse rolls are hitting cylinder fillet and doffer fillet on all sides. If good contact is made around the circumference of both the cylinder and doffer, the rolls are in good shape for best results in grinding.

An important item is to obtain the correct speed of traverse roll. I have found that 525 rpm is the best speed suited for 90s, 100s, and 110s wire. We use a 5¼" pulley and 65 to 70 rpm cylinder speed to attain the desired speed. The traverse roll makes two complete trips per minute across the cylinder and doffer at this speed.

If English grinding emery is used, pull the traverse grinder down on each side to spark against the wire several times during the traverse. Both ends should be set to produce a steady, smooth sound during the grinding operation. Particular attention should be paid sides where pulley and bands operate. See that this side is not grinding heavier than the opposite end. The driven end of the roll is held more firmly in place by the driving pulley, and uneven grinding is likely to result, because the pressure is not equal on both ends of the traverse roll. Both sides of the roll should be held firmly.

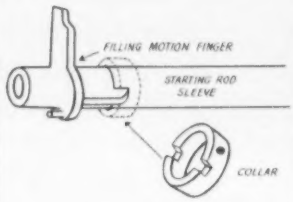
The forementioned suggestions also apply to drum grinding on flats. To check on this point, inspect each end of your old flats to see if one end is ground more than the other. The difference is more noticeable on old flats than on new ones. After traverse rolls have been set correctly and the cards have been grinding for 1½ to 2 hours, recheck the rolls and readjust if necessary. Tighten the roll stands to prevent slippage or uneven pressure on the wire.

Let the card grind until the rolls are grinding lightly. Six to eight hours is sufficient time to do a good job, provided the card was not exceptionally dull to start with. The card should be in perfect condition for resetting to make first class work. After 250 to 290 hours, regrind the card.

When grinding at 525 rpm grinder speed, instead of 600 to 750 rpm, the results will not only be better, but the wire will retain its sharp point longer. Also the wire will be in much better condition for regrinding. Fast grinding speed usually puts a needle point on the wire, and in a few days it will be dull again.

To save the doffer bearings from excessive wear, it is desirable to grind at 15 rpm to obtain best results. This can be done by running the licker-in while grinding. Use a 4" or 5" licker-in pulley to turn the doffer and obtain safer

grinding. I have used a larger gear to obtain this doffer speed, but it is much easier to change the licker-in pulley to obtain the same results. Although the foregoing suggestions are one man's opinion, we have secured good results by following the suggested practices. CONTRIBUTOR No. 8257



Collar Renews Loom Starting Rod Sleeve

The slots in each end of the starting rod sleeve of Draper X Model looms often becomes worn and impairs the efficiency of the motion. A collar, with slots cut to correspond with those of the sleeve, and fastened to the sleeve with set screws, will make the part as good as new. CONTRIBUTOR No. 8278

Are Neps Like the Weather?

EDITOR TEXTILE INDUSTRIES:

In our conversations with mill men, in our visits to mills, and in our own mill the subject of neps always comes up. Like the very common topic of conversation (the weather) neps seem to be something that everybody talks about, but seem to be unable to do anything about.

Practically everyone seems to agree upon one thing, namely, that neps are formed largely of immature fibers, and while there is a lot of theory as to how neps are formed, and where they are formed, agreement is by no means universal. And as to the removal of neps, the remedies are legion—but in spite of the remedies (?) we still have neps, and plenty of them!

We were privileged to read, in the January issue of TEXTILE INDUSTRIES, a review of the literature pertaining to neps, prepared by J. F. Bogdan, of North Carolina State College, in connection with their current experiment in nep control. Of course, the question of neps is not new, in fact the forementioned article cites literature on this subject published near the middle of the past century.

We have had some interesting experiences in the problem of nep control in our own mill. About two or three years ago we started a systematic check of the web from our cards. We have 234 cards and the plan was to make two counts on each card; each count from a different lap; the same person doing the counting. We made five or six complete rounds, averaged the two counts and posted the results on boards made out in groups according to each grinder's section. It was interesting to note that some cards were consistently low, others consistently high, and some low one time and high the next.

Some cards which showed a low nep count were scheduled for reclothing. After clothing, and what we thought was careful and thorough grinding and setting, these cards had an increased nep count. Other cards showed an improvement in nep count after reclothing.

We tried various speeds and rates of production, but the results were not consistent; that is, within the range of practicability. In other words our production rate would have to be cut in half to show any appreciable reduction in nep count, and with our set-up this was out of the question.

We tried various picker beater speeds and settings and different fan speeds and changes in our opening equipment with little noticeable effect.

The only thing that we ever tried which resulted in any worthwhile reduction in our nep count was a *nep contest* among our grinders. The grinders would tell

Kink Contest

$ $ Your Idea May Win $100 $ $

This contest ends November 15, 1950

ONE HUNDRED DOLLARS will be awarded for the most helpful short cut, kink, time-saving device, cost-cutting suggestion, or quality improvement idea submitted by November 15.

Contributions eligible for the prize must not have appeared elsewhere and must not be sent to any other publication.

All material will be paid for at regular space rates upon acceptance irrespective of the contest winner. Advise when submitting entry if participant's name may be used. Only one award will be made in each contest.

Participants are not restricted as to number of items submitted to compete in the contest. Each entry should be described in sufficient detail to make it easily understood, and where possible, glossy photographs or pencil sketches should be included. Finished drawings are not necessary.

All entries for this contest must be postmarked not later than midnight, November 15, 1950. Address: Editor "Textile Industries," 806 Peachtree Street, N. E., Atlanta 5, Georgia.

you that the neps were in the cotton and that there was little they could do about them; however we offered a substantial prize to the first grinder who reduced his neps to a certain figure, with smaller prizes to the other grinders who brought their nep count down to that figure.

On the first count, some of the grinders had reduced their neps one-fourth and one or two reduced them to one-third their previous average. This reduction was brought about by better grinding, more careful settings, and better all around attention to the cards.

Some grinders doubtless made closer settings at some points than the standard; settings that were closer than they had previously thought possible. They were all getting the same kind of cotton, yet some of the grinders had consistently lower nep counts than others. Some of the grinders said that the stripping schedule worked to the advantage of certain grinders. We have continuous strippers on all our cards and a number of tests before and after hand stripping showed no appreciable difference in nep count. To make sure no partiality was being shown, we varied our nep counting schedule, but the results remained the same as before.

In making one of the nep counting schedules we had this interesting experience: The girl who was counting the neps asked the writer to check her count of the web from a card which showed an exceedingly high nep count. After verifying her count, we contacted the secondhand of the card room and went with him to inspect the card in question. To our surprise the web contained only a few neps, but on the floor, in front of the card, was a little pile of waste indicating that an end had recently been down. We called the card tender and he confirmed our suspicion that the card had been choked about the time the nep count was made.

For some time we have had no one available for a general nep count, but we do not doubt that if a check were made the neps would be pretty high. Although a check by an outside laboratory shows that the maturity of our cotton is lower than average, maybe we need to start another nep contest!

We should like very much to see a lively discussion of this subject in the HOW OTHER MEN MANAGE department of this magazine, and we feel sure that the editors will make room for such discussions. We do not believe that discussions should be based solely on the *appearance* of the web as observed by the overseer or the secondhand, but upon actual nep counts by a competent, well-trained person. Although we may argue that one method of counting is better than another, we maintain that the consistency of the method is what really matters.

CONTRIBUTOR No. 8248

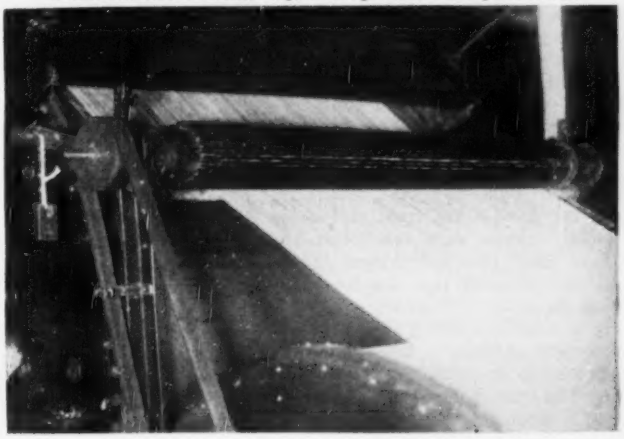
Brushing Yarn at Slasher Aids Weaving

EDITOR TEXTILE INDUSTRIES:

I have been a weaver for many years, and the best thing I have found to improve weaving is a device for laying the fibers on the yarn parallel with the body of the thread while the yarn is still wet with size at the slasher. The size sticks the fibers to the thread, and when it dries, the thread has a smooth surface. The smooth yarn eliminates most of the shedding at the front of the slasher. Shedding at the loom is reduced as much as 75%. The warps are smooth and no tangles or draw backs occur to hamper the weaver, thereby permitting the weaver to run at least 25% more looms without additional work. A test showed 12½% increase in production, two pounds per inch higher breaking strength, .02 more weight per yard, and the cloth has a smoother face.

A bristle roller with stiff bristles about ¾" long is arranged between the size vat and the large cylinder so that the thread will go into the bristle about ¼" deep. The bristle roller revolves in the same direction in which the yarn is moving, but at a slower speed so the yarns will drag through the bristles which impart a combing action in laying the fibers with the thread. The roll can be placed on top of the sheet

Brush installed on slasher lays fibers parallel while yarn is wet.



of threads or under it so the yarn drags through the bristle. The accompanying photo shows the roll on top of the yarn.

CONTRIBUTOR No. 8277

Painted Cans Identify Stock in Process

At Calhoun Mills, Calhoun Falls, S. C., a system has been set up which prevents errors in the movement of cans from the cards through delivery to the frames.

J. C. Godfrey, superintendent of the mill, noted that there was occasion for frequent error in selecting the right cans of sliver for the right process. All the cans appeared alike, and it was easily possible for a can to get out of order and go to the fly frames with only one drawing. Possibly, one can of stock could go through more drawings than desired.

At Calhoun Mills, sliver going into warp is run through two process drawing, single process roving frames, and is doubled in the spinning creels. Filling sliver is processed through conventional breaker type drawing, lap winders, and controlled draft drawing. In order to show what had been done to each can, Mr. Godfrey had different colored bands painted around the tops of the cans to identify the stage of stock in the process. All cans used at the cards and moved from the cards to the first drawing were painted with a bright yellow band. Yellow bands indicate sliver that has been carded but not drawn.

Sliver that has been drawn once goes into cans with blue bands, and the cans at the front of the second drawing are left plain. These plain cans go straight to the fly frames if they are to be used for warp. If breaker drawing is to go into filling yarn, it is processed through a lap winder and then to controlled draft drawing. The cans at the front of controlled draft drawing are painted green. This is to keep the finished drawing sliver separate because warp yarns are run double in the creel in spinning, and filling yarn is run single.

Since the inception of this system, mistakes have been minimized in moving stock. Painting the bands on the cans is not expensive, and once the system has been put in operation, the operatives find that it saves them both time and effort.

Soda Helps Humidification

EDITOR TEXTILE INDUSTRIES:

Several years ago, when I started to work as master mechanic for a mill in South Carolina, I was surprised by a practice which I had never seen before and have never seen since—and I have worked in quite a few mills.

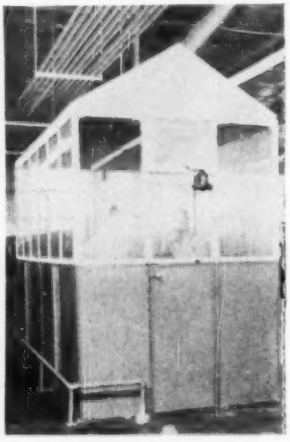
One day I noticed an operator dumping a powder into a feed tank from which water was drawn for the weave room humidifiers. When questioned, he told me that he was adding plain baking soda to the water. He said that the weavers had complained that there was not enough moisture getting to the yarn. He said that he always added soda to the humidifier water to increase the humidity.

I made a thorough investigation, and I found that he was absolutely correct. Soda added to the water in the humidifying system does definitely improve the running of the looms. It increases the humidity so much that it is actually possible to create a fog in a room that was formerly too dry, without changing the humidifier output.

Apparently, the addition of baking soda holds the moisture in

Smoke Houses for Mill Employees

Totally enclosed houses have been provided for smokers on each floor of the mill building at Borden Mills, Inc., Kingsport, Tenn. The smoke houses are of metal construction with glass windows as shown in the accompanying photograph, and a metal duct vents each house to the outside atmosphere. The duct carries away tobacco smoke and helps ventilate the house while the doors are closed.



The conveniently located smoke stations aid considerably in maintaining good morale among those employees who smoke, and the houses are constructed to prevent any danger of a fire hazard. The upper half of the sides are made of clear wire mesh-reinforced glass, making it possible for each operative to observe production machinery while he enjoys a smoke. Also, at a glance each operative can see whether there are too many persons already off their jobs and in the smoke house. The facilities are located so that employees in each department can stop work for a moment and smoke without going far from the job.

suspension—perhaps by increasing the surface tension on the droplets. That, admittedly, is only a guess. Perhaps a chemist can explain the phenomenon. We do know that it works, and it is our practice to add about ¼lb of soda to every five gallons in the tank any time we want to raise the humidity in the weave room.

CONTRIBUTOR No. 8276

Comments and further discussion on this letter are invited. Any other similar experiences?—Eds.

More on Reclaiming Filling

Question Briefed: *We are interested to know how other mill men handle their defective filling bobbins (soiled or tangled bobbins). Our problem is in preventing the costs of reclaiming from amounting to more than the reclaimed yarn is worth.* (CONTRIBUTOR No. 8264, *May*, 1950.)

EDITOR TEXTILE INDUSTRIES:

In reply to the question asked by CONTRIBUTOR No. 8264 regarding reclaiming filling yarn, I would like to give my ideas on the subject. Many mills are wasting more money than they are saving by reworking defective filling bobbins in that the labor involved in saving the bobbin is more than the difference between the price of a pound of filling and the price the waste is sold for.

It should not be too difficult to determine when it will be profitable to continue salvaging defective filling yarn. First, a close check should be made on the total amount of defective filling returned on each shift, then the poundage attributable to each defect should be separated and grouped into two main classifications: namely, (1) suitable for reworking; (2) not suitable for reworking.

The check should be run for at least a week on each shift. If after that length of time it is found that the majority of the returned filling is suitable for reworking, then I would say set up a quiller to take care of it and at the same time make a drive to eliminate tangled, yarn, rough filling boxes, and other causes of bad work. No program of this type can be a success unless defective work is kept at a minimum. If the bulk of the returned filling is found not suitable for reworking, then I would suggest that the yarn be cut off bobbins and sold for waste. It might be found profitable to wind this defective yarn off on a spindle and then cut it off so that it can be sold for mop yarn rather than unclassified thread waste.

CONTRIBUTOR No. 8302

Sleeves on Rods Aid in Spinning

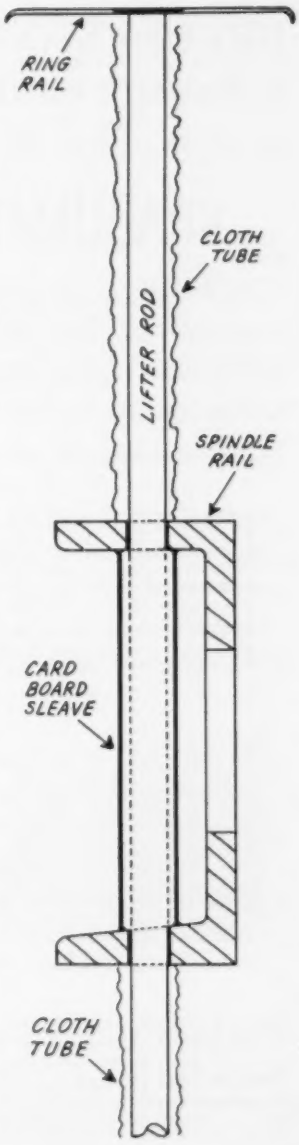
EDITOR TEXTLE INDUSTRIES:

Although spinning frames are cleaned regularly, loose fibers somehow find their way to the bushings of the spindle rail. Eventually the lifter rods jam, causing a loss in production, sloughed-off yarn, and an increase in the amount of maintenance necessary on the frames.

To prevent this trouble in our plant, we removed the lifter rods and cleaned them with stove polish. Before the rods were put back in place, two tubes of cloth were inserted; one at the bottom of the side rail; and one on top of the rail to cover the lifter rod. An iron tube was placed between the flanges of the side rail, and the tubes of cloth were attached to bushings. The tube of cloth below the side rail was lapped over a small metal ring and sewed on in that position (see sketch).

The metal ring is actually a small spring wire, held at one end by a bolt. As the lifter rod moves up and down, the tube of cloth reacts like an accordion bellows and keeps the lifter rod free from fly waste at all times. These sleeves have been installed on our frames for more than eight months with good results. Not a single lifter rod has jammed since we installed the cloth sleeves.

CONTRIBUTOR No. 8287



NEVER BEFORE
a direct humidifying
system like this new

GRADUMATIC

A different, redesigned atomizer combined with a new idea, has developed the only system of direct humidification which **measures moisture output and adjusts it to demand.**

Instead of "off and on"; instead of "over and under" humidifying **Gradumatics deliver fog continuously.**

Certified Climate Psychrostat is judge; decides if a mere breath (2 pounds) will do . . . or as much as 16 pounds per hour.

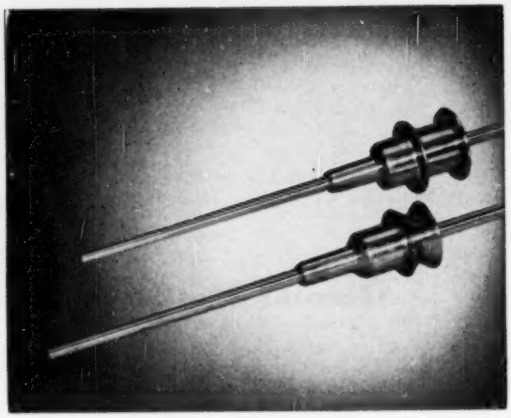
Simple, rugged, non-adjustable, self-cleaning, Gradumatics continue to run without tinkering or calibration.

This new Gradumatic system is direct humidification at its best.

Write for Bulletin 450

Parks-Cramer Company

Fitchburg, Mass. PARKS Certified Climate Charlotte, N. C.



WHORLS

- **Band and tape drive**
- **Precision made**
- **Made to specifications**
- **Guaranteed**

SPINDLES

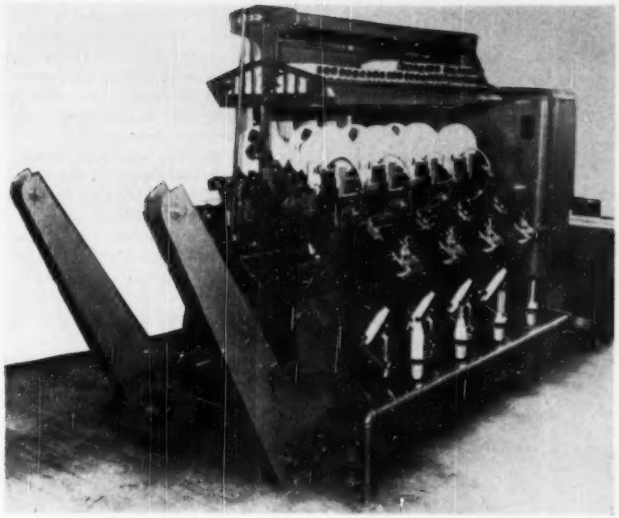
- **Retopped by electric butt welding or tops built up with chrome and reground to size**
- **Pointed, polished, straightened — as good as new**
- **All spindles tested for straightness and accuracy at running speeds**

Investigate the advantages of Southern WHORLS and SPINDLE repairs. Write, wire or phone for full information.

50th ANNIVERSARY OF SERVICE
TO THE TEXTILE INDUSTRY

Southern
SPINDLE & FLYER CO.
821 W. FIRST STREET
PHONE 2-1329 CHARLOTTE 1, N. C.

NEW EQUIPMENT
AND MATERIALS



The Auto-Coner drum winder by Universal Winding Co.

Automatic Knot Tying Feature of Drum Winder

A drum winder which features automatic transfer, automatic knot tying for each spindle, automatic sizing, unit replacement of all parts, pressure cleaning of tension and slub-catcher devices, and partial waste removal, is designated the Auto-Coner.

The machine operates on a vacuum principal, and nozzles which are located on each spindle are used to retrieve the ends whenever a break or runout occurs. There are two types of nozzles: one is the tension nozzle which retrieves the end from the supply and two, the package nozzle which retrieves the end from the take-up package, and these nozzles operate as follows:

Whenever a break or runout occurs, the tension nozzle moves into the tension bracket assembly and picks up the broken end from the supply package while at the same time the package nozzle is retrieving the end from the package and placing it into the knotter by means of an ejector. Once the ejector has deposited the end from the package nozzle into the knotter, the tension nozzle deposits its end into the knotter after which the knot is tied.

There is a knotter mounted at each spindle, and the fact that the knotter operates at low loads and low speeds greatly increases the life of the knotter. The knotter mechanism insures the fact that all yarn slack is tautly held throughout the tying of the knot and, consequently, knot slippage is eliminated.

After the knot has been tied, the tails are mechanically clipped and the waste sucked into the vacuum system where it is collected in a waste collector. The knot tied is said to be identical with those tied by mechanical hand knotters. An outstanding advantage claimed for this knotter is the fact that it does not have to be adjusted for various counts of yarn.

The Auto-Coner operates on the principal of a rotary traverse and package sizes up to 9 inches in diameter are obtainable. Whenever a supply bobbin runs out, the creel mechanism is activated and a new supply is brought automatically into position while simultaneously, the bobbin which has run out is ejected onto a conveyor belt which deposits it at a central collecting point.

The automatic sizing attachment on the machine can be very accurately adjusted within a range of several layers to a diameter of 9 inches.

Universal Winding Co., Universal Division, Providence, R. I.

For additional data, request item H-401, using business reply card on page 192.

Small, Light Weight Pneumatic Roll Picker

A pneumatically operated roll picker for easy and rapid cleaning of spinning and roving frame rolls is 6 inches long, ⅞" in diameter, and weighs only 8 ounces. The small size and light weight make one-hand operation possible, leaving the other hand free to remove lint collected by the tapered needle.

Manufactured by Desoutter Bros. Ltd. of England, the roll picker has recently been made available to American mills through an agent in New York.

Starting and stopping are quickly controlled by the light action lever switch, and an airline pressure regulator provides speed control for varying types of work.

Device is delivered complete with one needle, a 15-foot airline hose and connectors.

Newage Internation, Inc., 521 Fifth Ave., New York 17, N. Y.

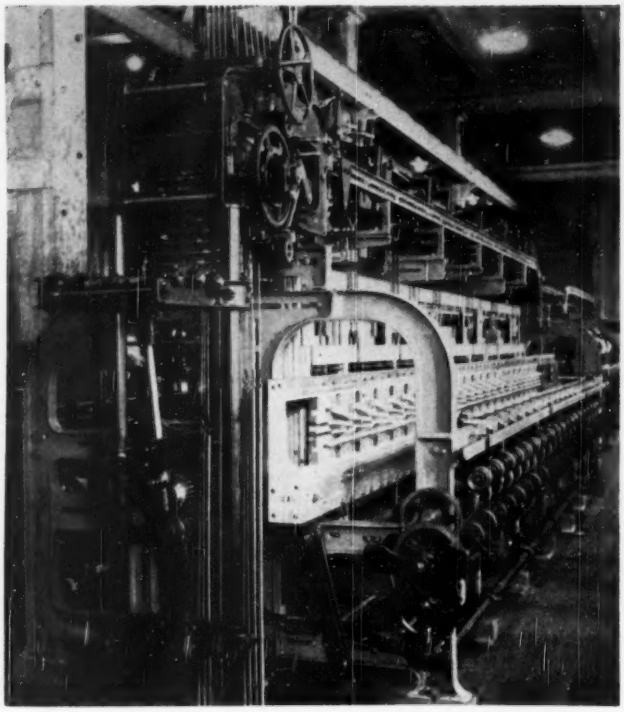
For additional data, request item H-102, using business reply card on page 192.

Safety Roving Truck

A new "Safety Roving Truck" which is designed and built with an inclinable slatted or roller type bottom, thus causing the contents to automatically gravitate toward the operator's end, as well as automatically freeing itself of any trash through the slatted or roller type bottom.

Roving truck (Sunray).

This truck is also equipped with a depressible end section at the operator's end, which keeps the operator from having to strain over a high



Cross shot loom for weaving Venetian blind ladder web (Fletcher).

end section in order to reach the contents on the bottom of the truck. This end section depresses easily when the weight of the operator presses against it, but also automatically resumes its original position as the operator's body weight is removed.

Sunray Company, P. O. Box 445, Spartanburg, S. C.

For additional data, request item H-105, using business reply card on page 192.

Venetian Blind Web Loom Features High Production

A recently developed 21-space, 4-shuttle, cross shot loom constructed for the single purpose of weaving Venetian blind ladder web will produce approximately four times the fabric made on a loom employing the rise and fall principle, according to its manufacturer.

For each forward and backward movement of the batten, all four shuttles pass from one block across the space to the other block, introducing 4 filling picks for each revolution of the crank shaft. This is made possible by a special mechanism connected to the head motion of the loom; it controls the vertical position of the strap harness frames. The high position weaves the strap warps of the upper face, the intermediate position weaves the strap, and the low position weaves the strap warps into the bottom face.

In effect there are four separate sheds, one for each of the four shuttles in the batten. The loom can be operated at a speed of from 90 to 100 picks per minute and produces approximately 3½ to 4 yards per space per hour of ladder web. After the ladder web is removed from the loom, there is a subsequent cutting operation required to separate the upper and lower faces.

Fletcher Works, Inc., Glenwood Ave. and Second St., Philadelphia 40, Pa.

For additional data, request item H-106, using business reply card on page 192.

Simpson Pneumatic Winder with Splicers

Time, labor, and material savings are advantages claimed for the recently developed Simpson pneumatic winder.

It affords the operator an unobstructed view of the material as it comes into the machine. When the roll of material is wound to proper size and the cut is to be made, the operator can readily see the seam coming up and is able to cut on the seam or very close to it.

After the cut has been made, the fingers on the gate feed the new end of material to the belts on the splicers which carry the fabric around the new shell, and a new roll is started without wetting or other means of making the material adhere to the shell. Splicers are then locked in neutral position until another cut is to be made.

A saving of up to 50 yards of material is possible in the completion of one roll, the manufacturer claims, and a clean, smooth, even wind is achieved.

Safety is another feature of the machine. The operator does not come in contact with nor is he dangerously near the cutting attachment.

Transfer arms provide an easy, safe mechanical method of transferring the roll from the back drum to the front drum for completion of the roll.

Speeds up to 200 yards per minute are attainable. This performance is made possible by actuating the cutting attachment by an air cylinder, thus obtaining a fast and accurate cut independent of the winding speed.

The winder, manufactured by Eddystone Machinery Co., operates at a speed consistent with the supply of material, thus avoiding any lag.

H. W. Butterworth Sons & Co., York and Cedar Sts., Philadelphia 25, Pa., selling agent.

For additional data, request item H-103, using business reply card on page 192.

Dye House Truck Won't Drip on Operator's Feet

An interesting feature of a new stainless steel dye house truck is a convex floor that drains the drip to the sides, where openings allow it to fall into a gutter inside the walls of the truck.

From this gutter the drip is carried to a central point under the truck where it is discharged well in-

Announcement!

ACETATE BLACK DYERS . . .

amazing new developments have been taking place in the improvement of our **AMACEL* BLACKS.**

Absolutely tops! the NEW, IMPROVED

Amacel BLACKS

. . . BLACK G.S.

. . . BLACK IV EXTRA

As developed with Developer BON or BONASOL* these new, improved *Amacels* give the finest **developed blacks** obtainable. Perfected through the latest scientific advancements, they offer to a greater degree than ever, better fastness—simplified application—consistent shade purity. Both are suitable for box or jig . . . both are highly dispersed—**practically water soluble**—holding stain on adjacent white viscose to a minimum.

American Aniline was the first successful U. S. producer of dyes designed especially for acetate fibres, and high quality has kept *Amacels* at the top in this field.

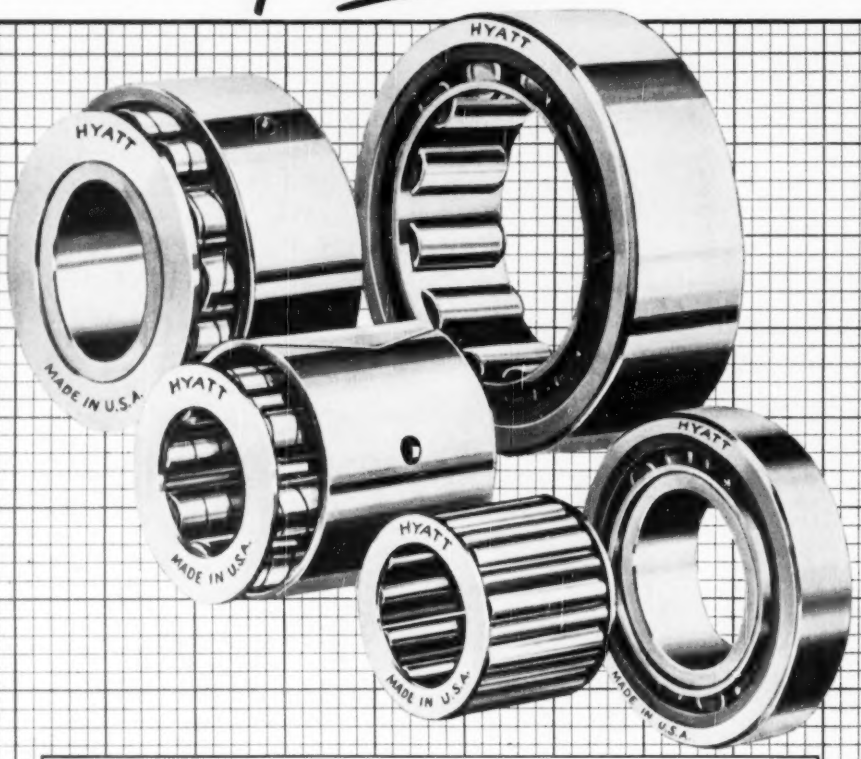
For detailed information on *Amacel Black G.S.* and *Amacel Black IV Extra*, as well as special data regarding your own particular requirements, consult our nearest branch. A.A.P. technicians are always happy to be of service.

AMERICAN ANILINE PRODUCTS, INC.

50 Union Square, New York, N. Y. • **Plant: Lock Haven, Pa.** • **Branches:** Boston, Mass. Providence, R. I. • Philadelphia, Pa. • Charlotte, N. C. • Chicago, Ill. • Los Angeles, Cal. Chattanooga, Tenn. • **Dominion Anilines & Chemicals Ltd.** • Toronto, Canada • Montreal, Canada

*Reg. U. S. Pat. Off.

HYATTS *pay off* in performance



Hyatt Roller Bearings are purposely designed and built *first* to *last*.

Aware of this, over the years, leading manufacturers of textile machinery build Hyatt Roller Bearings into their equipment for long life, ease of maintenance, economy of lubrication and trouble-free operation that bearing applications like this assure.

Ever mindful that Hyatts pay off in steady performance 'round the clock, the popular acceptance of Hyatt Roller Bearings today, by machine builder and user alike, is to be expected. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS

sue the perimeter of the bottom of the truck.

The result is that drip does not fall on the feet of the truck operator.

Glasco Equipment Co., Wait St., Paterson, N. J.

For additional data, request item H-104, using business reply card on page 192.

McGlynn Hays Spinner Has Several Improvements

The Universal high speed French type worsted spinning machine placed on the market early in 1948 has been improved to the extent that it is now practical to spin worsted yarn at spindle speeds in excess of 10,000 rpm. Recent improvements are summarized here:

1. Draft Zone. Six line, high draft, fiber control draft field employing roller drafting only without aprons. Suited to the control of all fibers from the shortest up to a maximum ratch setting of over 10".

2. Pendulum Type Top Pressure Roll Support. Providing free movement of the pressure roll to properly position itself and ease of inserting roving from the side during operation.

3. Ball Bearing Pressure Rollers. Precision constructed using lintproof, sealed type bearings requiring no lubrication.

4. Hydraulic Front Roll Pressure. Equal pressure applied to each pair of rolls by hydraulic means through use of a small pump at end of the machine. Pressure easily applied, adjusted to requirements and released, insuring uniformity on each roll at all times.

5. Improved Ball Bearing Type Spindle. Spindles are of heavier construction than former design, using larger diameter paper tubes. Bearings are sealed and lintproof but may be lubricated at one to two-year interval as required without removing spindle from machine. Each spindle equipped with individual knee brake.

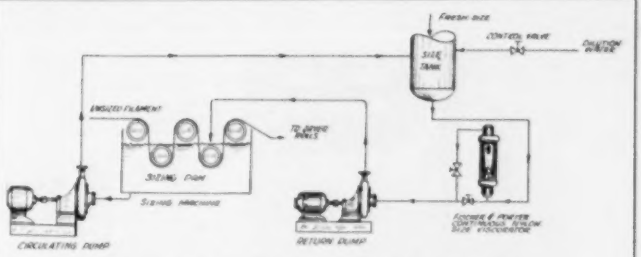
6. Package size. Net 8-ounce package using only 2¼" ring size by increase in package length. This feature permits the higher speeds with smaller ring and is made possible by use of the rising draft field.

7. Spin Regulated Drives. Individual drive for each side of machine, normally 200 spindles per side. Drives are variable speed, equipped with spin regulator unit maintaining uniform yarn tensions throughout the full bobbin and permitting maximum speeds.

8. Pneumafil Vacuum System. This unit is incorporated as a standard part of the machine with waste collected separately for each side of machine and permitting piecing of ends at high delivery speeds.

McGlynn Hays Industries, Inc., Belleville 9, N. J.

For additional data, request item H-108, using business reply card on page 192.



CONTINUOUS MEASUREMENT AND CONTROL OF NYLON SIZE VISCOSITY

A compact, in-the-line, indicating viscosity meter has been developed for nylon size service. The instrument is installed at eye-level directly in the size line, and affords an instantaneous and continuous check on the size viscosity.

Accurate measurement and control of size viscosity during throwing operation assures better quality control and actually provides savings in size consumption.

The Nylon Size Viscorator is available in indicating and also in remote recording-controlling instruments.

Fischer & Porter Company, County Line Road, Hatboro 2, Penna.

For additional data, request item H-101, using business reply card on page 192.

Beta Thickness Gauge Measures Without Touching

A new instrument developed in England and designated the "Beta Thickness Gauge" can measure the weight per unit length of material without touching it.

The reason for calling the instrument the Beta Thickness Gauge is

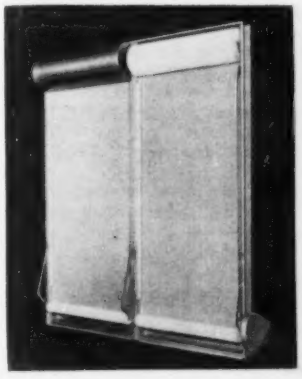
AUTOMATIC DRY TYPE AID FILTER

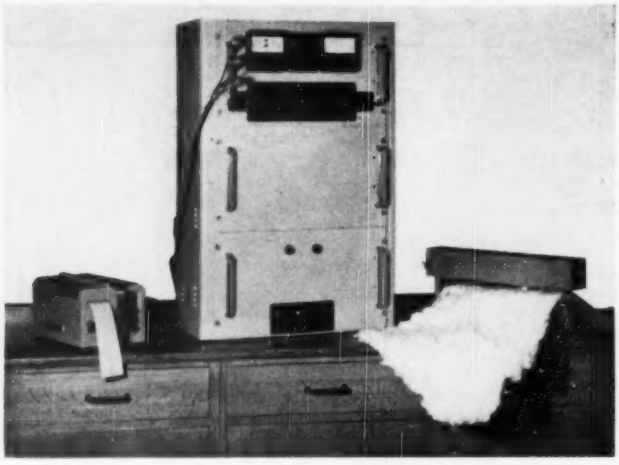
Designed primarily for cleaning air having a high lint content, the "Auto-Airmat" automatic dry type air filter shown here and described on page 111 of the July 1950 issue of TEXTILE INDUSTRIES, is reported to be especially effective for cleaning air recirculated from spinning and weave rooms.

A single ply of Airmat paper from a roll at top of the casing travels down the face of the filter on a rotating screen and is automatically re-rolled at bottom of casing, providing an easy means of disposing of the collected material.

American Air Filter Co., 125 Central Ave., Louisville 8, Ky.

For additional data, request item H-110, using business reply card on page 192.





Thickness gauge measures without touching (Baldwin Instrument).

that use is made of beta rays which are emitted from a special radioactive material produced in the atomic pile.

The beta rays are a stream of electrons propelled from the surface of these radioactive materials known as radio isotopes, at a speed very nearly equal to that of light.

Because the particles which form these rays are so small they are able to travel through what is apparently solid material. In so doing, however, some of the particles are absorbed by the materials and the amount of absorption varies according to the density of the material through which they are passing.

By measuring the amount of radiation emerging from the material, it is possible to determine the thickness of the material. This is the basis on which the new instrument works.

The equipment comprises three main parts: the isotope, the ionization chamber situated below it and the amplifier unit and instruments.

Baldwin Instrument Co., Ltd., Dartford, Kent, England.

For additional data, request item H-109, using business reply card on page 192.

Naphthols Now Available in Stock Solutions

Production of a new line of stabilized, highly concentrated, ready-to-use stock solutions of naphthols for use in dyeing and printing has been announced. Known as "Naf-Sols," the solutions are said to produce better, clearer tones while effecting savings in time and cost.

Due to their dependable, uniform concentration, and because the solutions do not contain undissolved particles and will not precipitate out, regular and uniform results are obtained when these products are used, the manufacturer claims.

Products are shipped in bung type drums which may be stored.

Augusta Chemical Co., Augusta, Ga.

For additional data, request item H-402, using business reply card on page 192.

Hydraulic Drive Maintains Constant Tension and Lineal Speed

The maintenance of constant tension and lineal speed on winding operations is reported to be possible with the Hydro-Wynd drive which is designed to eliminate jerkiness by automatically maintaining predetermined speed and tension without intermittent adjustment.

The new drive combines a hydraulic coupling wih a planetary gear set, whose ring gear is fixed to the impeller or pump of the hydraulic coupling. The planet gear carrier is fixed to the runner of the coupling, while the sun gear is fixed to the output shaft.

In operation, the automatic "slip" of the coupling reacts with the gear set against the varying torque and speed requirements of the winding spool to allow the Hydro-Wynd to replace adjustable slip clutches or other devices formerly used.

As the torque load increases or decreases, the Hydro-Wynd increases or decreases output torque directly proportioned to the load imposed.

On applications where controlled tension is necessary despite changes in materials, weights or speeds, a variable speed drive is used with the Hydro-Wynd.

On such applications as slashers, where lineal speeds may vary from creep up through cycles of several yards per minute, the Hyro-Wynd also requires a variable speed drive connected to the output end to compensate for changes in yardage requirements.

Twin Disc Clutch Company, Racine, Wis.

For additional data, request item H-403, using business reply card on page 192.

Narrow Fabric Needle Loom

A new Needle Loom for narrow fabric production is designed to weave with filling drawn from large cones of yarn and a rotary reed in which groups of warp ends always remain in the correct reed dent.

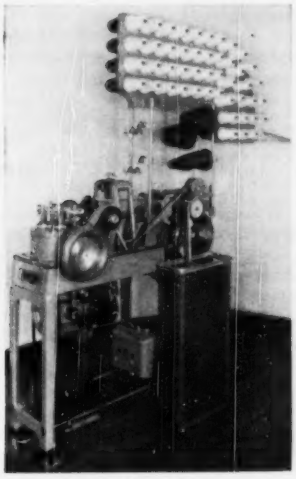
The resulting fabric has two picks in each shed, and alternate filling loops at each edge are knitted together to form a selvage. The filling loops thus locked are from alternate sheds.

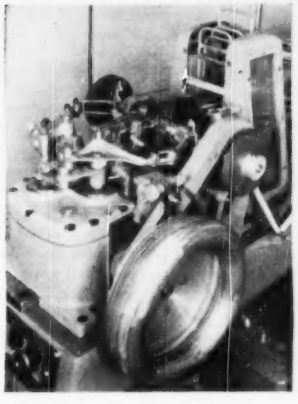
Two webs can be woven in the same head, one above the other. Thus one reed and one set of operating parts serve to double production.

The method of operation is briefly as follows, considering a single web only:

There are two filling needles, one at each side. Each one is carried upon an arm which is pivoted upon a rotating crank. An extension toward the front is connected to an oscillating link. Each crank rotates at the normal weaving speed. The link is moved back and forth at one-half this speed. As a result, the left needle goes through the shed and the filling is caught at the selvage by the knitting needle at the opposite side. On the next beat, needle No. 2 at the right goes through the next shed and the filling is caught by a knitting needle at the opposite or left selvage.

In the meantime, needle No. 1 has made a false stroke outside the web,



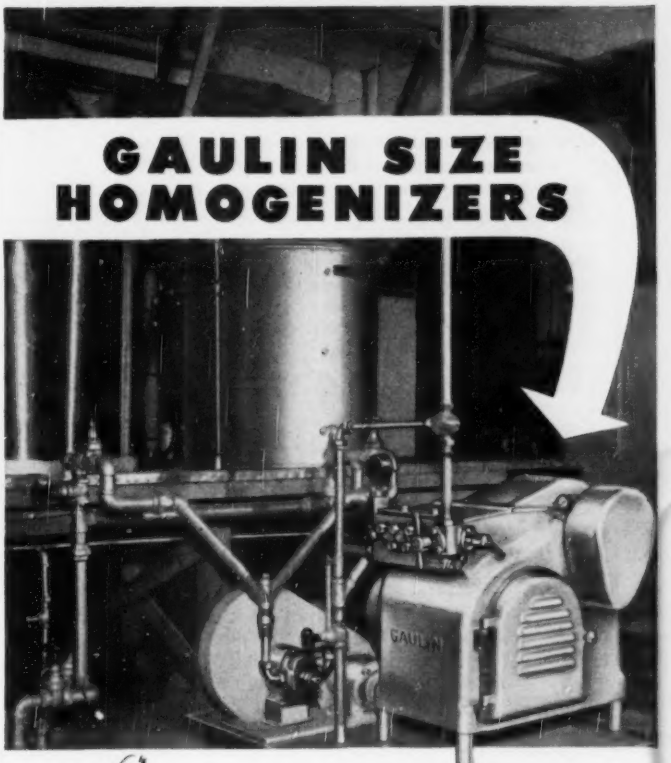


Above, needle loom for narrow fabric product on. Below, close-up of head of loom, showing working parts. (Crompton & Knowles)

due to its having been moved out of weaving action by the motion of the oscillating link. Subsequent operations are a repetition of this alternation, and each time a needle carrying filling goes through the shed the corresponding knitting needle picks up a filling loop and knits it into the previously-caught loop at that side.

The selvage knitting needles are moved by cam action, timed to operate in correct relation to each corresponding needle.

Each stroke of a needle is followed by the beating-up action of the rotary reed operating at one-half the weaving speed, so that there will be



GAULIN SIZE HOMOGENIZERS

Pay for Themselves Out of Savings

- *Improve Quality of Size*
- *Lower Heating Costs*
- *Reduce Cooling Time*

Records in mill after mill prove that Gaulin Homogenizers all save time, money and improve the quality of size.

Precision made of the highest quality materials, Gaulin homogenizers can be depended upon to maintain uniform size quality year after year. Their rugged construction throughout assures long-lived performance with little if any maintenance costs.

Get the full facts today. Find out how you can save with Gaulin Homogenizers.

Gaulin

MANTON GAULIN
MANUFACTURING COMPANY, INC.
51 GARDEN STREET, EVERETT 49, MASSACHUSETTS

SEND COUPON TODAY

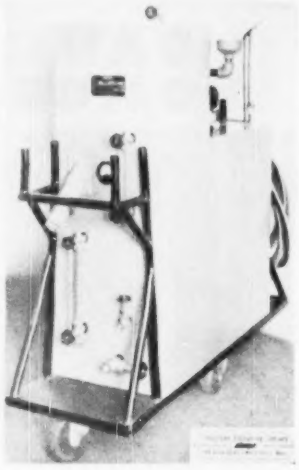
Gentlemen: Please send complete information on Gaulin Size Homogenizers and booklet on homogenized size preparation.

NAME _____

COMPANY _____ TITLE _____

CITY _____ STATE _____

ELECTRIC STEAM GENERATOR FOR LOOM CLEANING



For thorough steam cleaning of looms, this new Speedylectric Steam-Jet Cleaner JC-30 LCS is said to be most efficient. It features exceptional maneuverability and is only 20 inches wide so that it will readily pass through narrow loom alleys.

For complete description of this unit, see page 125 of the July 1950 issue of TEXTILE INDUSTRIES.

Livingston Engineering Co., 100 Grove St., Worcester 5, Mass.

For additional data, request item H-111, using business reply card on page 192.

two beat-up strokes of the reed for each revolution.

The motor power is ⅓ hp, with a V-belt drive to produce about 850 sheds per minute or with two webs, 1700 sheds per minute.

It is expected that the woven tape width may be varied from about 7/16" to 1¼", by adjustments in the same weaving head. A maximum of eight harnesses is practical at present.

Crompton & Knowles Loom Works, Worcester, Mass.

For additional data, request item H-404, using business reply card on page 192.

Series 16 of typical "H-W" CONDITIONER applications:

DOUGLASS
HOSIERY MILLS COMPANY SOUTH POTTSTOWN PA

April 28, 1950

Mr. P. Friend
c/o The Industrial Dryer Corp.
P. O. Box 850
Stamford, Connecticut

Dear Mr. Friend:

Since the installation of the "H & W" Conditioner at our Pottstown Plant, we have increased our perfection 15 denier monofilament nylon.

The Conditioner sets the stitch, therefore, eliminating picks and pulls and reducing mending to a minimum.

Loopers, Seamers and Examiners prefer handling, "Conditioned Nylons".

The "H & W" Conditioner has proven to be economical, dependable and essential in the manufacturing of nylon hosiery.

Sincerely yours,
DOUGLASS HOSIERY MILLS COMPANY
Charles V. Eaton
C. V. Eaton

DOUGLASS Nylons 54, 66 *Exclusively* NOW CONDITIONED with the "H-W" CONDITIONER

The Industrial Dryer Corporation
STAMFORD, CONN.

Miscroscope Facilitates Analysis of Fine Textiles

A range of magnification from 15x to 120x is provided by the "Metobor," a precision instrument designed specifically for analyzing textiles in the laboratory, office, or mill.

The complete instrument consists of two parts—the microscope tube and the base plate. The microscope is fitted with focusing adjustment and three models are available giving ranges of 15—35x, 40—60x, and 80—120x. The first range is adequate for all routine work involving thread counting, cloth analysis, and quality comparisons. The higher ranges provide effective aid to research.

Daylight is not required for illumination of the field of vision, an electric light (battery or transformer operated) being provided for this purpose. Light intensity can be varied. Superimposed on the image is a cross of fine wires providing vertical and horizontal cursor lines to aid in thread counting.

The base plate on which the microscope is mounted contains a scale which is calibrated in English and metric units and incorporates a vernier scale which permits accurate adjustment to a tenth of a millimeter. Microscope may be removed from its base for purposes of random inspection.

J. Borzkowski, 68 Kings Road, Prestwich, Manchester, England.

For additional data, request item H-405, using business reply card on page 192.

Thread Guides with Slots as Narrow as .020" Now Available

Precision thread guides with polished slots as narrow as .020" have been developed.

Closer control of fine denier yarns, faster processing, and improved quality are advantages reported by mills that have tested these AlSiMag narrow slot guides for more than a year, according to the manufacturer.

In package winding it has been found that the narrow slot gives perfect yarn control in the reversing of

the traverse arm, the manufacturer reports. This has eliminated loop-overs on the ends of the packages.

Several other applications have also demonstrated advantages in better yarn control. Some of these involve the use of very small inserts with narrow slots.

The narrow slot is said to localize the wear on the guide.

American Lava Corp., Chattanooga 5, Tenn.

For additional data, request item H-450, using business reply card on page 192.

High Speed, Semi-Automatic Narrow Fabric Loom

A 42-space, double deck, straight shuttle loom now on the market is highly versatile in that it will produce efficiently and economically tapes, ribbons, light webs, and elastic webs.

The speed of this loom is dependent upon several factors, a few of which are: the construction of the fabric to be woven, the quality of the yarns that are employed, the counts of the filling and warp yarns, and the operator's capabilities. From a mechanical standpoint, the loom is capable of operating at speeds of 250 to 300 picks per minute, according to the manufacturer.

Fletcher Works, Inc., Glenwood Ave. and Second St., Philadelphia 40, Pa.

For additional data, request item H-107, using business reply card on page 192.

Manual to Aid Instructors in Conduct of Personnel Administration Courses

An instructor's manual has been developed primarily as a guide for instructors who wish to use the problems, projects, and demonstrations at the end of each chapter of the text book, *Problems in Personnel Administration*, by Richard P. Calhoon, professor of personnel administration at the University of North Carolina.

A bibliography for each chapter has been included and also a brief list of additional topics for reports or amplification in lecture.

This manual and also the text are available from Harper & Brothers, 49 East 33rd St., New York 16, N. Y. Considered at some length in the

Because they're years ahead in steam generation . . .

only

CYCLOTHERM

Trade Mark Reg.

STEAM GENERATORS

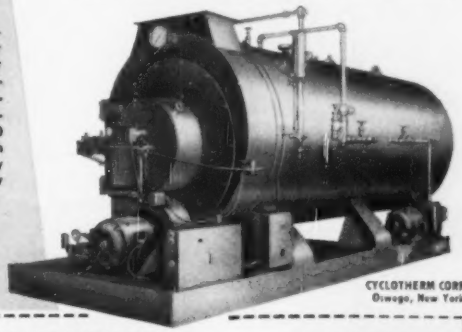
have cyclonic* combustion POWER

* **WHAT IS IT?** It's the modern scientific discovery of transferring heat at the highest degree of efficiency with a new low in fuel consumption. Principal factors of which are the cylinderized solid flame with its exclusive cyclo-motion power, designed to utilize the full potential of every particle of fuel . . . and the thin layer of air resulting from centrifugal force that's always between the flame and wall of combustion chamber. A combination to produce steam far in excess of conventional standards for measured heating surfaces.

SEND FOR *ALL* THE BIG REASONS

Learn how the completely automatic Cyclotherm with its unexcelled all-in-one package type features wipe out waste and excess costs. If you are planning a new or replacement boiler installation it will pay you to first get the facts on Cyclotherm. The coupon below is for your convenience.

SIZES available to fit your steam or water load for processing or heating. Low pressure to 200 psi fired with light or heavy oil, gas or combinations.



CYCLOTHERM CORP. Oswego, New York

CYCLOTHERM CORPORATION
OSWEGO, N. Y.

DEPT. TI-8

Gentlemen: Please send me bulletin P-1 showing the advantages of Cyclotherm's new concept in Heat Transfer. Without obligation, of course.

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

book are topics such as these: work load and job assignment; writing and administering policies and procedures; problems of interpreting legislation; the personnel administration and collective bargaining; methods of developing and effectuating a personnel program; problems of safety administration; women in personnel work.

(Readers of TEXTILE INDUSTRIES will recall that an article by Professor Calhoon entitled "The Future of Personnel Work" appeared on pages 87-89 of the October 1949 issue.)

Small Area Dehumidifier

A ⅛ hp dehumidifying unit for small areas where mildew, rust, and rot are caused by high humidity operates on a refrigeration principle. Under room conditions of 80 F and 70% relative humidity it is capable of removing 18 pints of water from the air every 24 hours, according to the manufacturer.

Carrier Corp., Syracuse, N. Y. (H-407).

Universal illuminator and viewer (Instrument Development Lab.)

Illuminator and Viewer Aid in Color Matching

The universal illuminator and viewer is a new accessory for use with the basic Color-Eye color measuring equipment. The attachment simulates in a controlled manner the hand action of the human color matcher in orienting samples relative to source and angle of viewing. It is suited to simple use with any external source of illumination as well as the internal source provided. For measurement of such difficult materials as pile fabrics, spinning of samples may be combined with angular adjustments.

Instrument Development Laboratories, 163 Highland Ave., Needham Heights 94, Mass. (H-408).

Replaceable Type Air Filter

The filtering media of a new replaceable type air filter consists of continuous strands of glass filaments held together at each point of contact by high temperature plastic bond to form a resilient pad. Designated the "Amer-Glas," the filter is made in all standard sizes for forced air heating, ventilating, and air conditioning systems. Pad is sprayed with an odorless and non-flammable adhesive and placed in a fiberboard casing between metal grilles.

American Air Filter Co., 125 Central Ave., Louisville 8, Ky. (H-123).

Single-Phase Motor

For use where a constant speed, high torque, single-phase motor is required in large ratings, a new repulsion-induction motor has been developed. An addition to the Tri-Clad line, the new motor combines the high starting torque of the repulsion motor with the constant speed characteristics of the induction motor. Designated Type SCR, the motor is available in 5, 7½, and 10-hp ratings, all 1800 rpm. 5-hp unit operates on 115/230 volts, while the other two use 230 volts.

General Electric Co., Schenectady 5, N. Y. (H-124).

Papers Describe Research on Fiber Behavior

A collection of 19 key papers on the wear resistance of textiles and related subjects published in Germany during the war years is now available through the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C. (price, $5.00). "Developments in the Wear Resistance of Textiles and Related Papers Published in Germany During World War II," a clothbound volume of 353 pages, summarizes significant research on fiber behavior (particularly artificial fibers) instituted by the Germans when forced to use synthetic materials after being cut off from peacetime imports of

✓ACETIC ACID ✓METHANOL
from a Competitive and Reliable Source in the South...
May we quote you competitive prices on our high quality, technical grade ACETIC ACID sold in standard strength solutions of 28%—56%—80%—84%—and as glacial acid? We equalize freight charges and deliver your ACETIC ACID in aluminum tank cars and barrels. METHANOL comes in new 54-gallon steel drums, carloads or LCL.
YOUR ORDER IS SHIPPED IN 24 HOURS!
"Located Centrally In the South"

CROSSETT CHEMICAL COMPANY
CROSSETT, ARKANSAS

natural fibers. Well illustrated; tables and charts included.

Pneumatic Liquid Level Transmitter

Using buoyant force on a partly immersed cylinder, a new liquid level pneumatic transmitter requires neither purges nor liquid seals. It is highly sensitive and requires little maintenance, according to the manufacturer. Vibrations will not affect operation, level can be measured in practically any tank or container, and pressure ratings make unit suitable for most applications. It is said to have extremely close control.

Brown Instruments Division, Minneapolis-Honeywell Regulator Co., Wayne and Roberts Avcs., Philadelphia 44, Pa. (H-117).

British Textile Books

Modern Textile Design and Production by R. H. Wright is a new book for the textile designer, printer and others engaged in the manufacturing of textiles, containing over 350 illustrations made from actual commercial products. Price, $8.50 plus postage.

Bibliography of Dyeing and Textile Weaving by L. G. Lawrie is a 144-page book providing a comprehensive list of works published up to the present day on the subject. Price, $3.25.

Both of these books are available from British Book Service (Canada) Limited, 263-267 Adelaide St. West, Toronto 1, Canada.

Safety Directory, 1950-51

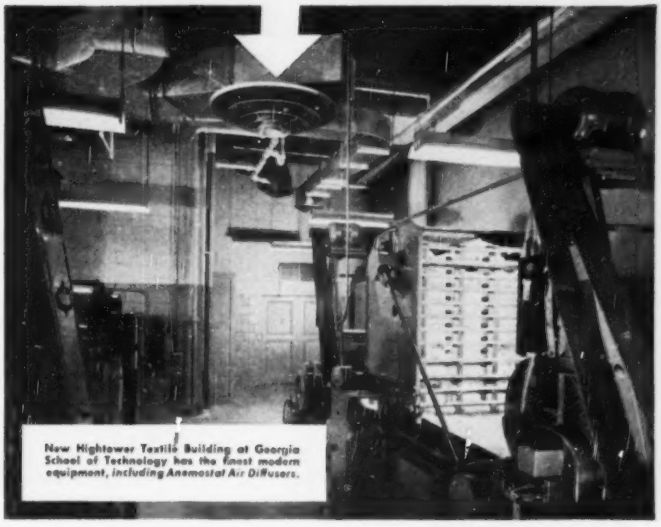
The new Best's Safety Directory for 1950-51, covering the entire field of safety, fire protection and control, hygiene, first-aid and sanitation, is now available (Alfred M. Best Co., 75 Fulton St., New York 7, N. Y.; price, $5.00). It shows what safety devices to use for specific hazards, how to use them, and where to get them.

Hook-On Wattmeter

Measurement without service interruption is the outstanding feature claimed for a new hook-on wattmeter applicable to active and reactive power measurements in single and polyphase circuits. Designated as

for better fiber control...
ANEMOSTAT AIR DIFFUSERS

One of the most important factors in the quality control of fibers is putting the *right* quantity of properly conditioned air *exactly where* you need it.



New Hightower Textile Building at Georgia School of Technology has the finest modern equipment, including Anemostat Air Diffusers.

Scientifically designed Anemostat Air Diffusers accomplish this by distributing any volume of cooled or heated air in predetermined patterns . . . *without drafts.* Anemostats equalize temperature within the occupancy zone to plus or minus one degree and equalize relative humidity as well.

You can also use Anemostat Air Diffusers for spot cooling to neutralize machine heat loads. They are adaptable, too, to zone control of special areas. Anemostat's wide range of designs—including adjustable diffusers—assure flexible and perfectly balanced installations.

SPECIAL BULLETIN 32 tells the full story on the application of **ANEMOSTAT AIR DIFFUSERS** to textile manufacturing and processing. Write for your copy.

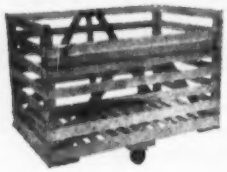
ANEMOSTAT®

DRAFTLESS *Aspirating* AIR DIFFUSERS

ANEMOSTAT CORPORATION OF AMERICA
10 EAST 39th STREET, NEW YORK 16, N. Y.
REPRESENTATIVES IN PRINCIPAL CITIES

"NO AIR CONDITIONING SYSTEM IS BETTER THAN ITS AIR DISTRIBUTION" AC-1354

Insure Against Rust and Snagging



with EXCEL No. 600 Slatted Conditioning Trucks

Brass screws and cadmium plated bolts eliminate any possibility of rust. Because they are fastened from the outside they also insure against snagging. The Excel No. 600 is constructed of highly polished cypress or maple and finished with two coats of heat and acid resistant Tropelite to form a durable snag-proof surface. Slatted sides, ends and bottom permit perfect saturation and drainage.

Casters are securely bolted to bottom of truck.

Representatives:

Mr. N. W. Eurey.....Lincolnton, N. C.
Mr. Paul Eurey.....Lincolnton, N. C.
Industrial Suppliers, Inc.
La Grange, Ga.
H. E. Linderson
Box 505, Providence, R. I.
Mr. Theodore Huston
2601 N. Broad St., Philadelphia, Pa.
Seabrook Transmission Co.
Anderson, S. C.

EXCEL
Textile Supply Co.

"Excel Trucks Excel"

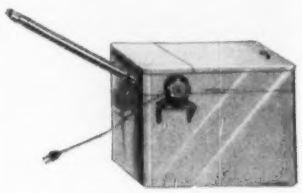
LINCOLNTON, NORTH CAROLINA

Type AK-2, it makes use of a removable magnetic hook to surround the current carrying conductor, and potential leads are connected as in a conventional single-phase wattmeter. Three phase balanced power measurement is possible with the instrument. Use of a single dial switch makes possible selection of any one of six power measurement ranges to provide readings from 3 to 300 kilowatts full scale deflection.

General Electric Co., Schenectady 5, N. Y. (H-409).

Disposal Unit for Fluorescent Lamps

Prompt disposal of burned-out fluorescent lamps may be accomplished with a new device that grinds the lamps to tiny pieces under water safely, quickly, and economically. Known as the Flur-O-Lamp Disposal, the unit is capable of disposing of



Flur-O-Lamp Disposal.

about 100 lamps in 10 minutes. Refuse can be carried away in a bucket. About 12 gallons of water are required for operation; also a 110-volt a-c current source for driving the motor. Less than two square feet of floor space are required for the unit.

Laduby (Flur-O-Lock) Co., Inc., P. O. Box 1123, New Haven, Conn. (H-410).

Robot Gate Operator

One of the outstanding features of a new Robot Gate Operator is that it will open and close a gate by the driver merely touching a button on the dashboard while the car or truck is in motion, thereby avoiding the necessity of leaving the truck or car in order to open the gate. Available in three sizes: Type SM-25-SS, gate width up to 6 feet; Type SM-33-SL, 6 to 8 feet wide; Type SM-50-SL, 8 to 12 feet wide.

Robot Appliances, Inc., 13165 Prospect Ave., Dearborn, Mich. (H-411).

"Pen" Microscope

For quick, accurate, "on-the-spot" inspection, the self-illuminated "Pen" Microscope is available; it may be carried in vest or coat pocket. Features: 40, 50, or 60 power magnification; knurled adjusting ring brings objects into focus instantly; satin nickel finish.

E. W. Pike Co., 492 North Ave. (Union) Elizabeth 3, N. J. (H-412).

Vertical Process Pump

Especially suited for applications where net positive suction head is limited and where space is at a premium, is the new encased, close-coupled, vertical, centrifugal Hydro-Line pump now available. Furnished with all types of drives. Pumps have cast iron bowls, bronze impellers, and stainless steel shafting; special materials available on request. Capacities up to 5000 gpm; maximum head, 1500 feet. Applications include pumping of acids, bases, mild or concentrated salt solutions at temperatures from normal to 400 F.

Peerless Pump Division, Food Machinery and Chemical Corp., Los Angeles 31, Calif. (H-413).

Central System Weathermakers

Lighter in weight, more powerful in performance and quieter in operation are advantages claimed for a new line of central system Weathermakers, Models 39S and 39T, which are available in sizes to cover a range of from 5 to 75 tons of refrigeration capacity. Other features: completely sectionalized to provide ready assembly on the job; easy access to all sections of the unit after assembly; no condensation and rusting on outside of unit; increased cooling surface, etc.

Carrier Corporation, Syracuse, N. Y. (H-414).

Titanium Tubing

Limited availability of commercially pure titanium tubing has been announced. Three standard tempers are offered: annealed, half hard, and hard drawn. Sizes: ¾" x .049" wall down to ⅛" x .010" wall. Heavier wall thicknesses are expected to be available in the future.

Superior Tube Co., Norristown, Pa. (H-415).

Trade is benefiting from shorter sailing time from fields of the south to mills of the north.
THE ISELIN DIARY, 1825

THE BETTMAN ARCHIVE

Bridging the gap from bale to sale

Yes, new markets and new methods meant *more* goods had to move *faster*—and they did. But it was still a long *financial* stretch from raw material to cash customer—one that many manufacturers bridged through the Factoring service of the firm of Iselin. . . . Today, Iselin Financing can help you, too—by converting accounts receivable to cash to help you take discounts, carry inventories, expand sales. It also relieves you of credit risks and losses. . . . Long experience, and methods proved by the success of our clients are at your service to help you expand your business with security. Send for booklet on our Factoring service to industry.

William Iselin & Co., Inc.

357 Fourth Avenue, New York 10, N.Y.
200 Keeler Building, Grand Rapids 2, Mich.

FOUNDED IN 1808

SERVING THE TEXTILE INDUSTRY SINCE 1899

Sonoco PAPER TUBES

FOR EVERY TEXTILE NEED

BOOTH 238
Southern Textile Exposition
Oct. 2 to 7, 1950
Greenville, S. C.

Modern automatic machines speed the manufacture of tubes to precision dimensions—parallel, convolute or spiral wound. SONOCO is equipped to make tubes to any specifications for the textile industry.

IN ANY PRACTICAL LENGTH AND WALL THICKNESS

1/8" I. D. to 24" I. D.

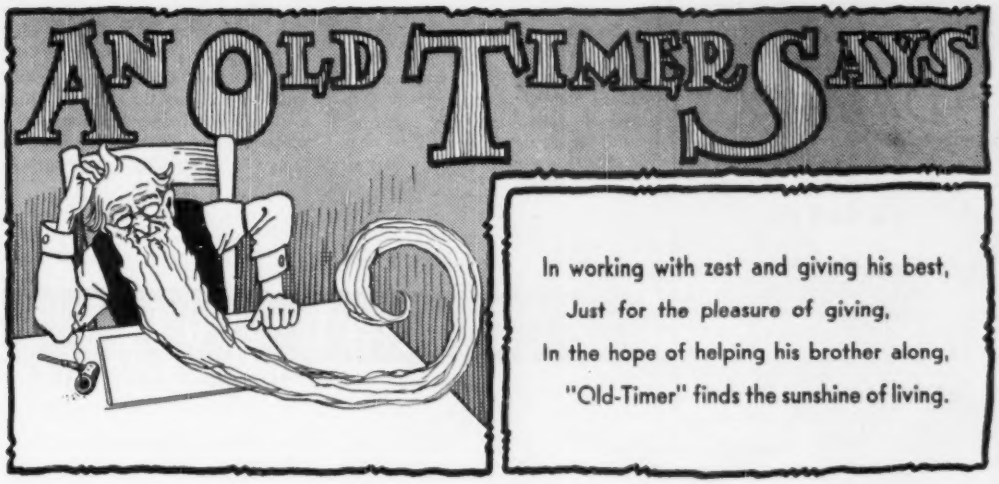
Special treatments include embossing, printing, Velvet Surface, Unitex (flocked) Surface, colored paper, colored ends, burnished ends and various impregnated processes.

sonoco
POWER THE WORLD
PAPER CARRIERS
REG. U.S. PAT. OFF.

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Find Things You Can Improve

(A continuation of the discussion, "Can You Dream?" which began in the February issue.)

ON THE WAY home after visiting a manufacturing firm where they use large quantities of steam (at 150 lb pressure) in processing their product, the thought occurred to us that an alert engineer might show that firm how to increase its earnings materially.

Would it be practicable for that firm to install a direct connected steam turbine generator, step up steam pressure to probably 250 lb, put their steam through the turbine first to generate electric power, then use the exhaust steam from the turbine to do the processing in their plant?

There is an enormous demand for electric power in that section of the country; therefore they could have a pretty good income from this power. The question, of course, is, would it pay them to do this? How about it, Mr. Engineer? Are we just dreaming?

Anyway, this thought reminds us of the time we took charge of a cotton mill and found all of the slasher condensation going into the sewer. Do you know how much steam it takes to operate a slasher? The average overseer or superintendent does not know. One way to find out is to run the exhaust into a barrel or other container and condense it so that you can measure the exhaust in gallons or pounds.

It was in the summer when we took charge so when cold weather came and the heating system was turned on—Yea! You guessed it—darned if the condensation from heating system wasn't going to the sewer too. Look around, Mr. Overseer and Mr. Superintendent. You can never tell! We have seen some pretty dumb things being done at supposedly modern cotton mills.

For example: we saw an insulated 3-in. steam pipe from boiler room to office. And when we told the master mechanic to double the insulation on it—darned if he didn't ask why? Well, gentlemen, whenever you put your hand on an insulated steam pipe and the insulation is hot, you certainly don't have sufficient insulation on that pipe. Another layer of insulation will most assuredly save you some *more* condensation.

Many modern plants are guilty of this fault. Regardless of what the insulation people recommend for your steam pipes, if heat is still coming through, your firm is losing the money it cost to produce that heat, and another layer of insulation right over what is on the pipe will prove a good investment.

It takes no imagination to find things like that around a modern?? textile plant. However, it was not a textile plant we referred to when we asked engineers the question about installing a steam-electric-turbine. That plant is producing large quantities of steam which they use *only* to process their product. The thought we had was that it might be profitable for them to install a direct connected steam turbine and electric generator and put their steam through the turbine first, probably at a higher pressure, then use the exhaust from the steam turbine for processing. More electric current is needed badly in the section

DANDUX

DOFF BASKETS

No. 40-638

DANDUX

for the very finest

BASKETS

HAMPERS

TRUCKS

HANDLING and SHIPPING BAGS

WORK TABLE COVERING

BIN LINERS

HOSIERY CARRIERS

in snagless Glosstex too!

DANDUX

C. R. DANIELS, Inc.

Manufacturers of Everything of Canvas

Daniels, Maryland

Send for Cat. No. 1-8

where the plant is located.

Now back to our general theme: "Imagination."

Why don't you make notes while you are reading an OLD-TIMER article? Or any other article which is intended to be of an instructive nature? While you are reading, your mind is working—you read something which calls to your mind an item concerning your work—right then you should make a note of that idea so that you will not forget it. That is the *sure* way to profit by what you read. *(To be continued)*

PERSONAL NOTES

ABOUT MEN YOU KNOW

Dr. Lars A. Welo recently retired as physicist in the Cotton Fiber Division at the Southern Regional Research Laboratory of the U. S. Department of Agriculture, New Orleans, La. During the past five years he has conducted important fundamental research on the physical properties of cotton.

Dr. Welo

Hubert Boddie has become superintendent of maintenance at Mount Vernon-Woodberry Mills, Inc., Tallassee, Ala., succeeding Lester Sayers, who, as noted, is now general manager of Dunson Mills, LaGrange, Ga. Mr. Boddie previously was associated with the mills at Tallassee, but returned there from a position with Lane Cotton Mills Co., New Orleans, La.

Research fellowships for the forthcoming academic year have been granted by Textile Research Institute, Inc., Princeton, N. J., to the following scientists: **George M. Bryant,** Anniston, Ala.; **Kenneth H. Cram,** Ottawa, Canada; **William G. Hammerle,** Hamilton, Ohio; **Robert A. Martin,** Hawthorne, N. J.; **William P. Riemen,** Madison, Wis.; and **Donald L. Underwood,** Racine, Wis.

Martin J. Lydon, professor and dean of students at Lowell Textile Institute since 1948, has been elected president of the Institute. Prof. Lydon succeeds Kenneth R. Fox, who resigned to join Burlington Mills.

Roderick H. Wogan succeeds the late Richard L. Thompson as general manager and assistant treasurer of Sulloway Hosiery Mills, Inc., Franklin, N. H.

At its recent annual meeting, **Harold B. Sturtevant** of the Rhode Island School of Design was re-elected president of the Alumni Association of the New Bedford Textile Institute.

Neill M. Dalrymple has been named manager of the Fieldcrest Towell Mill, Fieldale, Va. Former manager J. H. Lindsay is on leave of absence for a year because of ill health. Mr. Dalrymple's previous position as superintendent has been assumed by **D. E. Simons,** who was assistant superintendent.

Mr. Dalrymple

J. Welch Harriss was recently elected president of Flair Hosiery Mills, Inc., High Point, N. C. **W. W.**

Sharpe, Jr. was named vice-president and general manager, and **J. Harriss Covington** was elected secretary.

D. M. Williams, who recently resigned from Calvine Cotton Mills, Inc., has joined Carolina Mills, Inc., in an executive capacity.

J. P. Stevens & Co., Inc., has announced the appointment of three new executive vice-presidents: **William J. Carter,** executive officer of the firm's Carter manufacturing group at Greensboro, N. C.; **Raymond G. Emery,** vice-president, director, and chairman of the manufacturing committee and executive officer of the Dunean manufacturing group; and **Joseph H. Sutherland,** vice-president, director, and chairman of the merchandising committee.

John E. Fite, Jr., Krout & Fite Manufacturing Co., Philadelphia, Pa., was recently elected president of the Association of Narrow Fabrics Manuafcturers, Inc. Other officers elected were: vice-president, **William C. Lowndes, Jr.,** Southern Weaving Co., Greenville, S. C.; secretary, **Joseph W. Greene, Jr.,** Hamilton (R. I.) Web Co.; treasurer, **Amor P. Smith,** Russell Manufacturing Co., Middleton, Conn.; assistant secretary and assistant treasurer, **Arthur R. Hutchinson,** of J. Sullivan & Sons Manufacturing Co.

Cyrus M. Neuner has succeeded L. E. Macomber, resigned, as manager of Aldora Mills, Barnesville, Ga., a subsidiary of General Tire & Rubber Co. Mr. Neuner was formerly in charge of personnel and industrial relations at Aldora.

Alfred Quance, formerly in charge of dyeing at the American Woolen Co.'s Champlain Mill, Winooski, Vt., is now head dyer of the company's Wood worsted Mill, Lawrence, Mass., replacing **Fred A. Dushame.**

Due to ill health, **Frederick B. Klein** has resigned from the presidency of Alexander Smith & Sons Carpet Co., and is succeeded in this position by **William F. C. Ewing,** formerly executive vice-president. Mr. Klein will continue as chairman of the board.

James F. Corbett, associated with Pacific Mills for the past eight years, has been made manager of the cotton and rayon division.

Walter A. Qualman, Jr., was recently appointed superintendent of the S. Stroock & Co. mills in New-

Not with

ETERNALURE*

RESIN FINISH FOR NYLONS

WHEN you finish with Eternalure, "menders" and "seconds" are greatly reduced because the hose are handled more easily and safely with minimum pull threads. "Shiners" are rare, too!

Don't forget, also, that with Eternalure your hose will have dainty beauty, snug fit and extra strong resistance that will last for the life of the hose.

Your processing remains the same when you use Eternalure, and you do not have to heat or cure the finish.

It's Time You Tried
*ETERNALURE**

*Trade Mark Reg. U.S. Pat. Off.

onyx CHEMICALS FOR DYEING · FINISHING · PRINTING

ONYX OIL & CHEMICAL COMPANY
TEXTILE DIVISION
JERSEY CITY 2, N. J.
CHICAGO · BOSTON · CHARLOTTE · ATLANTA

In Canada: Onyx Oil & Chemical Co., Ltd., Montreal, Toronto, St. Johns, Que. For Export: Onyx International, Jersey City 2, N. J.

AS A MAN BENDS . . .
SO BENDS the new

LAWLOR Model 12-W
SCRUBBER, WAX-POLISHER

The adjustable handle makes it possible to clean under counters, machines, desks, lockers, etc. Operator can raise or lower it to any angle within an 80 degree arc.
Equipped with set of 4 sectional brushes or solid round brush. AC or DC. Rubber tired ball-bearing wheels. Comes with 50 feet of rubber covered cable.

LAWLOR Model 20-D

It's just the machine for large areas. It scrubs and squeegees floors. One operator does both jobs with this remarkable two-in-one machine. Clean water is fed from one tank upon the soaped floor, the 19" diameter revolving brush scrubs it thoroughly. Then a rubber squeegee mops up the dirty water which is vacuum pumped into a second tank.
The Model 20-D is only 22" wide and can be operated around machines and equipment. AC or DC.

MOP WRINGERS

Quality built of all steel with perforated rolls. Foot lever operation. Made for one or two pails.

MOPPING TANKS

Made of heavy galvanized steel with welded seams. Two compartments, each with shut-off. Foot-pressure wringers. 30 or 60-gallon capacity.

All Lawlor Equipment is sold and serviced by local Janitor Supply Houses

Write for Catalog of complete line
S. C. LAWLOR CO.
Quality Floor Equipment for 50 Years
121 N. Aberdeen St., Chicago 7, Ill.

burgh, N. Y. Before joining Stroock last year, Mr. Qualman was associated with the Portland (Ore.) Woolen Mills.

A former president of Clarence S. Brown and Co., **Robert B. Low**, has

Mr. Low

joined Dan River Mills, Inc. to assist W. J. Fullerton, director of fabric development and planning.

Henry J. Dupont has left Verney Corp.'s plant at Manchester, N. H. to become superintendent of Reyville Textiles, Reynoldsville, Pa.

Frank B. Kilduff, formerly with Goodall Sanford, Inc., Sanford, Me., is now overseer of dyeing and finishing at Lincolnfield Mills, Lincoln, Me.

William Mills has joined Normandie Mills, Inc., Nashua, N. H., as superintendent. Previously Mr. Mills was with Premier Thread Co., Central Falls, R. I.

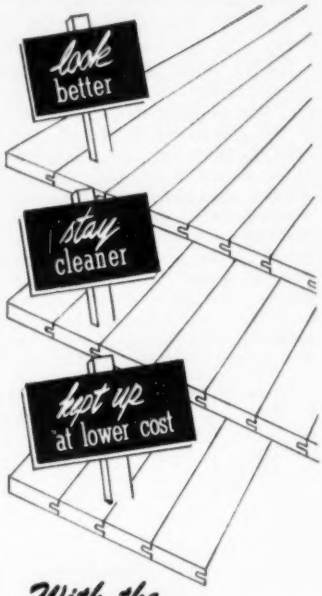
John A. Patterson has been awarded S. Stroock & Co., Inc.'s two-year scholarship in textile tech-

Mr. Patterson

nology at the State Institute of Applied Arts and Sciences, Division of State University of New York. Mr. Patterson is employed in the dye department of Stroock Mills at Newburgh, N. Y.

Dr. Edward Abrams was recently appointed head of the Textile Section of the Southern Research Insti-

YOUR FLOORS maintained with FLOROSEAL



With the MODERN METHOD of "DRY MAINTENANCE"

With your regular staff of maintenance men and the Floroseal, Florotone method of "dry maintenance" cleaner, better, longer wearing, safer, easier-to-maintain floors are yours for fewer maintenance man-hours. Write for complete details of how this is possible . . . do it now.

SELIG Selig's
Manufacturing Chemists Since 1896
342 MARIETTA STREET, ATLANTA
OFFICE & WAREHOUSES DALLAS · HOUSTON · NEW ORLEANS

tute, Birmingham, Ala. Dr. Abrams practiced recently as a textile consultant in New York City, and has specialized in many fields of textile research.

Cason J. Callaway, Jr., associated with the sales organization, Callaway Mills, Inc., for the past three years, has been transferred to the textile manufacturing enterprise, Callaway Mills Co. His new duties have not been announced.

Dr. Joseph H. Brant recently resigned as director of research for the Bates Manufacturing Co. to join the Gillette Safety Razor Co. as director of research for its Toni Division in Chicago, Ill.

Harry J. Devereaux, president of the American Wool Council, was recently elected chairman of the board of directors of The Wool Bureau, Inc. **Reginald G. Lund,** chairman of the International Wool Secretariat in London, was appointed to the Bureau's executive committee, succeeding Earl Newsom.

Formerly with the York division of Bates Manufacturing Co., **George Bradbury** is now with the Merrimack Manufacturing Co., Lowell, Mass.

Paul C. Alford, Jr., was recently elected secretary of the Textile Research Institute, Inc., Princeton, N. J., replacing D. B. MacMaster, who resigned. Mr. Alford will continue as administrative assistant to the director of research.

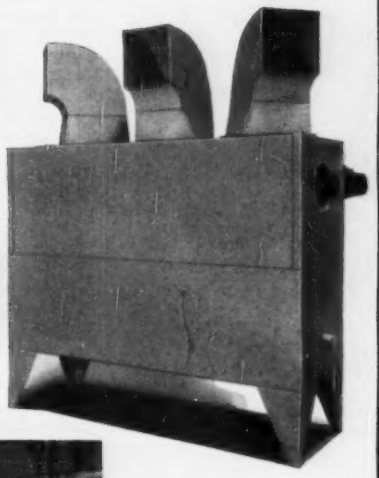
Paul H. Bubeck, formerly superintendent at Meridian (Miss.) Hosiery Mills, has been made superintendent of the new Stylewise Mills, Inc., plant at Carrollton, Ga.

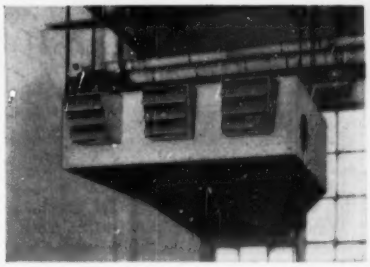
The honorary degree of Doctor of Textile Science was recently presented by North Carolina State College to **John F. Matheson,** president of Mooresville (N. C.) Mills.

An honorary degree of membership was recently conferred by Phi Psi Fraternity, national professional textile organization, on **Seabury Stanton,** president of the Hathaway Manufacturing Co., New Bedford, Mass. The degree was supplemented by an award of recognition for his "outstanding achievement in textile processing." Members of the fraternity's student chapter at New Bedford Textile Institute proposed and sponsored Mr. Stanton.

Arthur E. Tousignant, formerly assistant general manager of Spof-

PLAN EFFICIENT HEAT DISTRIBUTION WITH THESE SPACE-SAVING UNITS!





Buffalo Flat Suspended Lowboy with Filter Box and Duct Connection to Fresh Air—Supplying Warm, Clean Make-Up Air.

Now is the time to make plans for adequate plant heating next winter! "Buffalo" BREEZO-FIN HEATERS, top left, operate on 2 to 100 lbs. steam pressure, have efficient "Buffalo" BREEZO FANS and adjustable louvers to throw plenty of heat just where you want it. For suspended installation, taking no floor space. 20 sizes. And for large floor areas, "Buffalo" HIGHBOY and LOWBOY HEATERS provide both healthful heating and ventilating. Standard, sectionalized construction allows moving all units into your building through standard doorways. Ideal for duct distribution. WRITE FOR DETAILS NOW—be ready for winter heating problems!

First For Fans

BUFFALO "Buffalo" FORGE COMPANY
175 MORTIMER STREET BUFFALO, NEW YORK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Branch Offices in All Principal Cities

VENTILATING · AIR WASHING · AIR TEMPERING · INDUCED DRAFT · EXHAUSTING · FORCED DRAFT · COOLING · HEATING · PRESSURE BLOWING

Getting Uneven Yarn?

Worn saddles may be the trouble, for they *will* cause the top rolls to drag.

Inspect your saddles at regular intervals and replace them the minute they have outlived their usefulness, as they won't last forever.

"It costs so little and saves so much."

LOCK-IN SADDLE

Has device for oiling top rolls with very little attention. May be used to weight all three rolls or (by reversing back saddle) to weight front and back rolls only. One of many different types that we furnish.

DIXON
LUBRICATING SADDLE CO.
Established 1876
BRISTOL — RHODE ISLAND

Southern Sales Representatives:
R. E. L. HOLT, JR., & ASSOCIATES
P. O. Box 1474 Greensboro, N. C.
J. W. DAVIS, Mfg'rs Agent
P. O. Box 745 Columbus, Ga.

ford Mills, Inc., Wilmington, N. C., has been promoted to general manager.

Formerly with J. & P. Coats, Inc., **Emernon M. Bullard** is now with Clark Thread Co., Inc., and North Georgia Processing Co., Atlanta, as assistant to **Frederick W. Thomas**, head of the manufacturing division of the mills of these companies.

Joseph H. Wright was recently elected a vice-president of Burlington Mills Co. Mr. Wright joined the firm in 1948 and has been in charge of international operations and contacts since November, 1949.

Obituaries

On June 17 **Isaac Andrews**, 74, founder of Andrews Co., Spartanburg, S. C., died after several days' illness.

After a long illness, **Roy T. Bishop**, 69, president and general manager of Oregon Worsted Co., Portland, Ore., died on June 24.

Valentine J. Lipscomb, 45, general manager and superintendent of the Piedmont (S. C.) Manufacturing Co., died on June 21 after a three weeks illness.

Lyman A. Hamrick, 51, president of the Paola Manufacturing Co., and vice-president and general manager of Alma and Musgrove Mills, Gaffney, S. C., was drowned in Lake Summit, N. C., early in June.

George B. Sharples, 49, manager of the northern division of Ralph E. Loper and Co., died recently during a golf game at Fall River, Mass.

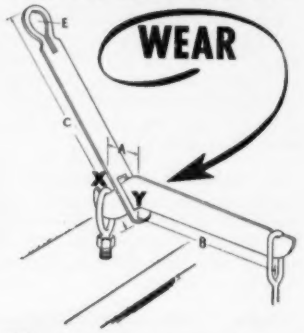
While in Fall River, Mass., to attend Mr. Sharples' funeral, **William Healey**, 49, associated with Ralph E. Loper Co. in Greenville, S. C., died suddenly in his hotel room.

George W. Pressell, 62, vice-president of E. F. Houghton & Co., died on June 5 at his home in Ocean City, N. J.

James H. Edwards, 80, died May 26 in Philadelphia, Pa. He was formerly head of the dyeing department of the Dobson Mills, and vice-president of John Campbell & Co., Inc., dyestuff manufacturer.

Edward A. Robertson, 49, treasurer of Bachmann Uxbridge Worsted Co., Inc., died in New York City on May 23, after a long illness.

It pays to know the whereabouts of WEAR



WHAT you don't know CAN hurt you! It can be extremely painful. Excessive wear of stirrups and levers in your drafting assemblies, especially when *not* noticed, prevents GOOD SPINNING.

For example, excessive wear at points "X" and "Y" above, often unseen, will destroy proper weighting ratios. Careful inspection of *stirrups, levers* and *lever screws* should be made regularly, and worn parts replaced immediately.

DIXON makes a large line of weighting appliances designed to function perfectly and produced in volume. The savings effected by this volume production are passed along to you. Order your parts from Dixon now and compare for quality and price.

DIXON MANUFACTURES:

1. More than 350 different stirrups, each with varying lengths — "C" — and special head openings—"E"—to properly fit over and lock on saddles.
2. More than 275 different levers with varying lengths—"B" and "A"—to allow for any desired leverage.
3. Over 35 different lever screws with varying diameters, threads per inch and loop lengths.

Quick delivery of spare parts is possible in most cases.

Be sure you know your saddle assemblies are doing their job.

"It costs so little and saves so much"

DIXON
LUBRICATING SADDLE CO.
Established 1876
BRISTOL — RHODE ISLAND

Southern Sales Representatives:
R. E. L. HOLT, JR., & ASSOCIATES
P. O. Box 1474 Greensboro, N. C.
J. W. DAVIS, Mfg'rs Agent
P. O. Box 745 Columbus, Ga.

SUPPLIERS' NEWS

WHAT THEY ARE DOING

Perry E. Moore of Robert Moore & Co. has been elected president of the **New York Cotton Exchange.** The new vice-president is John C. Lee of Scatterty & Jones, and G. Clarke Watson was re-elected treasurer. William Reid of Bache & Co., New York, was re-elected president of the **Wool Associates of the New York Cotton Exchange, Inc.** Also re-elected were E. Bradford Keith, first vice-president, Kenneth W. Marriner, second vice-president, and John M. Williams, treasurer.

Work has begun on a 5-acre plant in Anderson, S. C. for the Poinsett Lumber & Manufacturing Co., a subsidiary of **Singer Sewing Machine Co.** It will be used for manufacturing and assembly of Singer sewing machines and is expected to employ nearly 1000 people.

Ralph L. Beach, associated with **York Corp.** since 1926, has been promoted to assistant general service manager of the firm. Mr. Beach will assist Roger H. Dowling, general service manager, in guiding the firm's extensive service organization.

David Thomson, president of David Thomson Associates, Haverford, Pa., was recently elected a director of **Cyclotherm Corp.,** Oswego, N. Y.

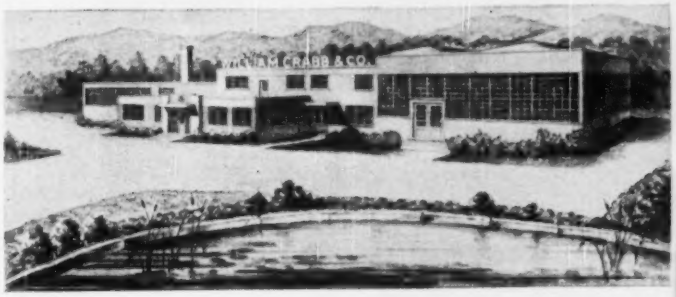
The **DeVilbiss Co.,** Toledo, Ohio, has announced plans for establishment of a modern manufacturing plant in Somerset, Pa., which is expected to result in closer cooperation with major suppliers and permit more rapid and economical distribution to its customers.

Emmons Loom Harness Co., Lawrence, Mass., is now assembling wooden heddle frames at its Charlotte, N. C., branch, according to a recent announcement. The company has also announced formation of a Mexican subsidiary, to be known as "Emmons de Mexico S.A." It will be represented by Leo Lenk, Apartado 533, Ave. Republica Guatemala No. 4, Mexico, D. F., and will be used for sales of reeds produced in Mexico as well as for distribution of mill supplies.

The 25 year Club of **Foster Machine Co.** held its annual dinner and

if you can't visit our **new** plant...

NEAR ASHEVILLE, N. C.



-here are a few **quick facts**...

- Located between Swannanoa and Black Mountain, in North Carolina, on Highway 70, on the Southern Railway's Asheville-Salisbury line.
- A modern heat-treating plant of 3 new furnaces, capable of heat-treating all types of steel has been installed.
- Equipment for heat-treating and passivating stainless steel of the 400 series, in addition to the regular line of high-carbon steels, with both salt and oil hardening facilities.
- A complete new machine shop.
- Capacity will not only take care of our own needs, but is also available for outside work.
- Four Leeds & Northrup Micromax-Controlled Homos for tempering. Now testing a new shredding and bale-breaking machine.
- The recent purchase of an apron business completes our line.

You are cordially invited....

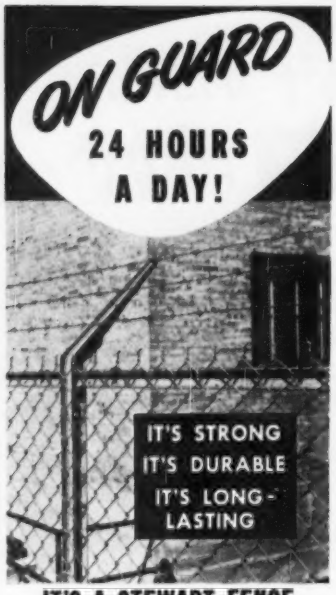
You are cordially invited to visit this modern plant. Let us show you the results of our more than 80 years' experience making Pins, Logs and Cylinders.

"FOR BETTER SERVICE TO THE TEXTILE INDUSTRY"

WILLIAM CRABB & CO.

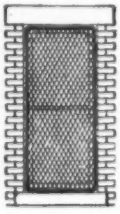
P. O. Box 95

BLACK MOUNTAIN—NORTH CAROLINA



IT'S A STEWART FENCE

Notice the sturdy All-Beam framework . . . the extension arm and line post—an integral unit. Stewart Non-Climbable Chain Link Wire Fence, the heaviest and strongest manufactured, features a number of exclusive structural advantages you can't afford to overlook. Write for folder "Here's why you should buy a Stewart Chain Link Wire Fence."



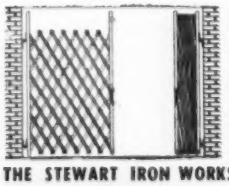
WINDOW GUARD
(Wire or Iron)

Made with round or channel frames to fit any size or shape opening. When requesting prices please give measurements and send diagrammatic sketch.

WIRE MESH PARTITIONS—Sectional

Fit any height or width. Easily and quickly erected. When writing for prices please give all measurements involved.

STEEL FOLDING GATES



Made in single or double gate construction to fit any width opening. Prices on request. Please give width and height of opening.

THE STEWART IRON WORKS CO., INC.
1724 Stewart Block Cincinnati 1, Ohio

Stewart IRON and WIRE FENCES

meeting on June 23. Sixty-nine men have reached the 25-year status with the firm, with James T. Hill, erecting foreman, dean of the group with 51 years of service.

An expanded sales and service plan designed to aid in the improvement of textile operations has been announced by the **Dayton Rubber Co.** J. O. Cole, vice-president and regional director, will head up the program and will also direct southeastern area sales and servicing of industrial automotive roller, railway and latex foam products made by Dayton. Mr. Cole's headquarters will be at the company's plant in Waynesville, N. C., and the sales offices in Greenville, S. C.

Mr. Cole

A. E. Campbell has been appointed sales manager of the **Clapp Instrument Co.**, Webster, Mass.

Stein, Hall & Co., Inc. has announced the appointment of Leonard F. Costello as manager of the textile department of the sales division. Norman Nuttall has been named assistant technical director. Both men joined Stein, Hall in 1940.

Mr. Costello

Taylor, Stiles & Co., Riegelsville, N. J., has set up a completely equipped testing laboratory to which any one can send samples of materials of any kind, for test cutting to any specified dimensions of fineness. The installation includes cutters for paper shredding, dicing,

2 Great Models for

TESTING MOISTURE CONTENT

in
- Wool
- Cotton
- Rayon and
- Nylon

MODEL PD-1
for textiles in loose or compressible forms—3" penetration.

MODEL K-2
for textiles in cones, rolls, beams and similar forms.

10-DAY FREE TRIAL!

Try one of these moisture testing instruments for 10 days—use it, test it and prove its superiority. Send samples, moisture range and Purchase Order to cover trial period. No obligation!

Quick, Accurate Readings

In less than 3 seconds you can test moisture content of practically all types of textile materials, including cotton, wool, rayon and nylon in fabrics, packages and loose forms.

This portable instrument is designed for "on the spot" checks in your plant. Moisture Register is easy to operate—requires no technical knowledge or complicated figuring. Cost is negligible in comparison to advantages. Write today for complete details. Specify type of material to be tested.

MOISTURE REGISTER CO.
Dept. H, 133 North Garfield, Alhambra, Calif.

ELECTRONIC MOISTURE REGISTER
The standard in moisture testing

thread and rag cutting—all of the latest and most efficient types.

Sawyer F. Sylvester succeeds George O. Linberg as assistant to the director in the textile chemicals department of **Monsanto Chemical Co.'s** Merrimac division. Francis K. Burr has been appointed technical service manager. His former position as manager of the department's office in Charlotte, N. C., is now held by Robert N. Foster. John T. Rose has been made a member of the textile chemicals sales staff.

Eric Weyl, textile engineering consultant, has moved his office from Manchester, N. H., to 2509 Vail Ave., Charlotte, N. C.

The Formica Co., Cincinnati, Ohio, has announced plans for construction of a modern, one-story industrial plant which will house finishing, inspection, packing, shipping, and raw material warehousing facilities for the company's laminated plastic products. This will be the first phase of a $7,000,000 expansion program, according to the announcement.

H & B American Machinery Co. has been appointed as exclusive selling agents in all foreign markets, except Great Britain and Australia, for the new Termacomber manufactured by the **Terrell Machine Co.** H & B will also serve as co-distributors in the domestic market.

Robert C. Medl, formerly associated with the McCormack-Medl Corp., has joined the staff of the **Quaker Chemical Products Corp.,** Conshohocken, Pa., as technical director. Quaker has also announced the appointment of Oliver Bennett as technical sales representative to the textile wet processing industry of Georgia and Alabama.

Aberfoyle Manufacturing Co. has moved its New York sales office to Room 4915, Empire State Building, providing larger quarters for consultation and service.

The Air Conditioning and Refrigerating Machinery Association at its annual spring meeting elected Arthur P. Shanklin, vice-president of **Carrier Corp.,** Syracuse, N. Y., as president.

After 48 years of service with **Quaker Rubber Corp.,** division of H. K. Porter Co., Inc., Frank L. Jones, secretary and treasurer, has retired. F. A. Rehorst has been made secretary and V. P. McNichol, assistant treasurer. Other officers recently

(Continued on page 193)

ATLAS LAUNDER-OMETERS and FADE-OMETERS

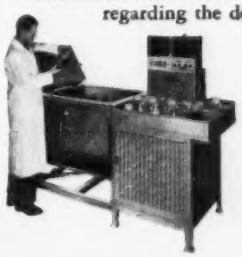
. . . in the new Riegel Laboratory

. . . used for quality control, development and testing of products and processes

In the modern, new laboratory recently constructed by the Riegel Textile Corp., Atlas Launder-Ometers and Fade-Ometers make constant quality control possible by providing accurate washing and color fastness data on samples of fabrics being run through production lines.

As part of the research program inaugurated by Riegel officials, these Atlas-Ometers help also to provide complete information on each new fabric while it is still in the developmental stage as well as to maintain the high standard of quality in daily production. In this manner, Riegel avoids costly trial and error methods still practiced in some textile plants today.

Technicians at this laboratory conduct washing tests of the A. A. T. C. C. in the Launder-Ometer to determine the fabric's resistance to shrinking, its color fastness, and resistance to washing and mechanical action. The Fade-Ometer is used to obtain factual data regarding the degree of fading registered on the sample by sunlight, temperature, and humidity. The Atlas cycle timer unit can be set to duplicate any test at any time.



New research model Launder-Ometers with capacities ranging from 20 pint jars to 6 half-gallon containers are now available as part of the complete line of standard Launder-Ometers.

ATLAS ELECTRIC DEVICES COMPANY

361 W. Superior St., Chicago 10, Ill.

PACKAGING AT ITS FINEST . . .

Hayssen wrapping is preferred by particular people.

Fully automatic — it replaces costly hand wrapping.

Provides exact registration of printed overwraps.

Operates quietly at a high production rate.

Handles practically any type of wrapping material.

Backed by 40 years of wrapping machine experience.

WRITE TODAY for full information and the name of your HAYSSEN representative.

HAYSSEN MFG. COMPANY • SHEBOYGAN, WIS.

Hayssen
ELECTRIC EYE WRAPPING MACHINES

IT PAYS TO WRAP
THE HAYSSEN WAY

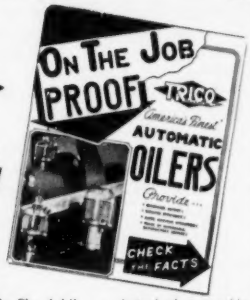
TRICO AUTOMATIC OILERS

REG. U.S. PAT. OFF.

JOB PROVED

From Coast To Coast

This Book **FREE**



WRITE FOR IT TODAY

TRICO AUTOMATIC OILERS "On The Job" . . . Actual photographic proof of TRICO's acceptance by industry everywhere. 12 interesting pages of TRICO applications on nationally recognized machinery and equipment . . . You too can get real lubrication protection for your equipment.

TRICO "KLIPLOK" CLAMPS

• *Save Fuses* • *Save Clips* • *Save Power*

Lock fuses and clips together. Stop premature fuse blowings . . . unnecessary shutdowns and wasted current. Users say "They Are Worth Their Weight In Gold".

WRITE FOR BUL. NO. 6

TRICO FUSE MFG. CO. Milwaukee, Wis.

M·B "AMOSKEAG" PNEUMATIC ROLL PICKER

MODEL A.V.T.
20,000 R.P.M.

This is NOT a grinder, but the original pneumatic tool especially designed for the SPECIFIC Purpose of

REMOVING LINT and FLY

from the top rolls and other parts of the drafting elements on

SPINNING FRAMES also ROVING FRAMES

Spindle design permits using PICK (which gathers the fly and lint), 3/16" diameter by 5" long when used on Spinning Frames and 3/16" diameter by 7" long when used on Roving Frames. Exhaust air directed back of roll picker to prevent fly and lint from being blown into yarn when spinning—PATENT APPLIED FOR. Special grease-sealed bearings. No lubrication required. Weight only 14 oz.

WILSON F. HURLEY ..... P. O. Box 1443, Greenville, So. Car.
Virginia and South Carolina
J. W. DAVIS ..... P. O. Box 745, Columbus, Ga.
Georgia, Alabama, Mississippi, Louisiana
CHARLOTTE SUPPLY CO. ..... Charlotte 1, No. Car.
North Carolina Representative
GEO. M. HAND, c/o Matthews Equipment Co., 509 No. 25th St., Reading, Pa. . . . N. Y., Pa., Maryland and New Jersey Representative
R. D. HUGHES SALES CO. ..... 1812 Main St., Dallas 1, Texas
Texas, Oklahoma and Arkansas
MATTHEWS EQUIPMENT CO. ..... 93A Broadway, Providence 3, R. I.
New England Representatives

M·B PRODUCTS
46 Victor
DETROIT 3, MICHIGAN

HELPFUL BOOKLETS FREE

Here is the "cream of the crop" of literature on textile subjects as prepared by TEXTILE INDUSTRIES advertisers to aid in mill operation and management. These reference books and catalogs are free for the asking and there is no obligation involved. Read through the list carefully for booklet on the subject or New Equipment in which you are interested. Then fill in the numbers of those desired on the coupon on page 192 and mail it to TEXTILE INDUSTRIES. ("First Listings" shown below are not confined solely to TEXTILE INDUSTRIES advertisers).

This service is restricted to those engaged in operation and management of textile industries

First Listing of New Publications

8-1. Fireproof Door brochure describes new wood-faced fireproof door with core that does not burn and is rot and vermin-proof. Kaylo Div., Owens-Illinois Glass Co., Toledo 1, O.

8-2. Ventilating Fans. 32-page catalog describes wide range ventilating fans with much engineering data; well illustrated. The Moore Co., Marceline, Mo.

8-3. Maurey Multiple V-Drives booklet describes line of Ful-Grip Quick Detachable Sheaves and Mor-Grip V-Belts with reference tables. Maurey Mfg. Corp., 2915 S. Wabash Ave., Chicago 16, Ill.

8-4. Ball Bearing Catalog arranged to show bearing units used in each of the various phases of the textile industry operation . . . 44-pages and highly illustrated. Fafnir Bearing Co., New Britain, Conn.

8-5. Technical service bulletin explains shipping case packing and sealing methods. Said to be the most complete booklet of its kind published on the subject. Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.

8-6. How to Strip Paint. An interesting account of materials and procedures designed to simplify the removal of oil base and synthetic paints, enamels, and similar finishes from metal surfaces is provided in 14-page booklet by Oakite Products, Inc., 22 Thames St., New York City, N. Y.

8-7. Northern Hard Maple Flooring. Illustrated color brochure giving detailed technical information. Maple Flooring Mfrs. Assn., Box 678, Oshkosh, Wisc.

8-8. New Water Conditioner. Bulletin 4801 describes the advantages of both hot process and zeolite softening . . . such as savings in capital investment, in chemicals, and in operating attention required. Cochrane Corp., Philadelphia, Pa.

8-9. Cashmere Wool. The fascinating story of Cashmere wool production in Tibet, beautifully illustrated, has just been published under sponsorship of The Bernhard Altman Corporations of Austria, England, New ork and Texas. Twelve postal colored drawings by the celebrated Austrian artist, Hands Lang, depict scenes of the Himalayan country and of the tribesmen in their daily work. The Bernhard Altmann Corp., 1451 Broadway, New York 18, N. Y.

8-10. Rotary Pump. The new DeLaval A-313A IMO pump is described in a new bulletin as a general service screw-type rotary pump designed for pumping petroleum products, and other light or viscous fluids as required for rotary and steam atomizing oil burners, oil transfer, lubrication, hydraulic systems and similar services. Cross section drawing and description of pumping principle. DeLaval Steam Turbine Co., Trenton 2, N. J.

8-11. Cotton Fibre Testing. A new booklet "Cotton Quality Control Through Fibre Testing," has been prepared by the United States Testing Co., Inc. This well-illustrated booklet describes in detail methods and equipment used in conducting tests on cotton for Pressley strength, Fibrograph length uniformity, micronaire fineness and maturity. United States Testing Co., Hoboken, N. J.

8-12. Spreader Stoker. Bulletin 890 describes Spreader Stoker with overthrow rotor that provides exceptionally uniform fuel distribution. Stationary, hand dumping or power dumping grates. Many sizes assure efficient application to all types of boilers and steam generators fully discussed. Detroit Stoker Co., Detroit, Mich.

8-13. Tachometers. New Catalog 146-C describes Tachometers for checking speeds of operating equipment periodically, and also permanent tachometers used as a component for machines and rotating equipment showing speeds continuously in RPM, feet or yards per minute, total output, or any desired indication. Jones Motrola Corp., Stamford, Conn.

8-14. Plasti-Weld. Spinning frame and loom bobbins are described in a new booklet entitled "The Modern Approach to the Ideal Bobbin." Full information on these patented synthetic yarn carriers. American Paper Tube Co., Woonsocket, R. I.

8-15. Unistrut Rack. Catalog No. 600 just published includes a compact presentation of the Unistrut Rack story with 46 different photographs of typical applications with detailed ordering information. Complete drawings of the various sizes of Unistrut metal channel and basic fittings recommended in the building of most Unistrut Racks are also incorporated in the catalog. Unistrut Products Co., 1013 Washington Blvd., Chicago 7, Ill.

8-16. Pneumatic Conveying Systems. Bulletin No. 103 describes carrying of lumpy, granular or powdered materials in a flow of air, or inert gas, without segregation, contamination or excessive abrasion within the system. Many applications discussed with diagrams of typical installations. Convair Corporation, Pittsburgh, Pa.

8-17. Research Administration. To aid the staff members of Arthur D. Little, Inc., in their review of research policies and procedures for their clients, a carefully selected bibliography of books and articles on "Management of Industrial Research" has been prepared. This bibliography is now available on request. Arthur D. Little, Inc., Cambridge 42, Mass.

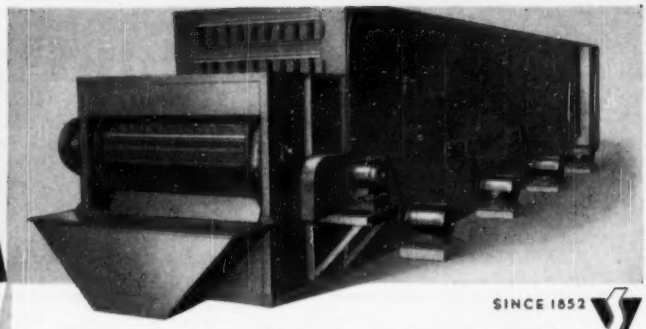
8-18. Cotton Examolite. New booklet describes this low cost, fluorescent type fixture for large area illumination of cotton sample rooms. This Booklet No. 142 explains the lighting problems confronting the cotton classes and how they may be solved. The Macbeth Corp., P. O. Box 950, Newburgh, N. Y.

8-19. Polyphase Motors. Bulletin No. EM4-812 describes one to 75 horsepower horizontal motors, illustrating construction details in cross section and cutaway views, appearance, insulation, bearings, ventilation, mounting, etc., fully discussed. A. O. Smith Corp., Motor Div., Los Angeles 22, Calif.

8-20. Permacel. Industrial tape for the textile industry is described in a new folder on pressure-sensitive industrial tape. Uses discussed and types applicableable to a particular job described. Industrial Tape Corp., New Brunswick, N. J.

8-21. Solenoid Valves. New Bulletin "V" lists sizes from ½ inch to 3 inches; valves for normally open or normally closed service; stainless steel or Jenkins disc seats; valves with special dash-pot construction to stop water hammer; 3-way solenoid valves, etc. Drawings of typical installations of direct operated solenoid valves for automatic or remote flow control. The Johnson Corp., Three Rivers, Mich.

for WOOL, COTTON, RAYON and other Synthetics and LOOSE MATERIALS

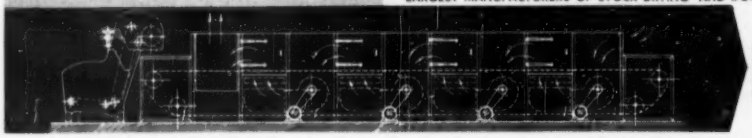


SINCE 1852

SARGENT'S CONTRA-FLOW Single Apron Dryer

Employs the counter-air-flow heating principle to provide rapid, economical drying.
New, fast, completely automatic.
The material and the air drying it enter the dryer at opposite ends and travel through in opposite directions. Wet material is subjected first to wet, hot air, then progressively to dryer, cooler air, emerging DRY, at ROOM TEMPERATURE.
No heat loss . . . No overheating of dry material.
The most efficient machine ever developed for drying loose materials.
For complete information please write for Bulletin No. 183.

C. G. SARGENT'S SONS CORPORATION
Graniteville, Massachusetts, U.S.A.
LARGEST MANUFACTURERS OF STOCK DRYING AND WOOL WASHING EQUIPMENT IN AMERICA



Schematic diagram of the SARGENT CONTRA-FLOW SINGLE APRON DRYER showing direction of travel of air through fans and heating elements. Material travels in opposite direction.

GENERAL ECONOMIC, MANAGEMENT . . .

4. HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

5. FACTORING AND FINANCING — Illustrated booklet on how factoring works, cost and credit information.—TEXTILE BANKING COMPANY, New York, N. Y.

6. "WASTE REDUCTION AND CONTROL"—19-page illustrated booklet giving primary waste factors; how to calculate cost of departmental waste; actual waste figures from mills; contains survey of waste practices. — SOUTHEASTERN ENGINEERING CO., West Point, Ga.

10. "LABOR AND MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES"—8-page illustrated folder outlining principles of industrial engineering as they apply to textiles.—AMERICAN ASSOCIATED CONSULTANTS, INC., New York, N. Y.

11. FLEACHTR JUNIOR "SUPER-SELF-BALANCING" EXTRACTOR—Illustrated folder describing this new extractor with the highly efficient self-balancing arrangement which uses steel springs instead of rubber buffers.—FLETCHER WORKS, INC., Philadelphia, Pa.

12. CONDENSED LISTINGS—8 page pocket sized booklet listing by plant flow the machinery and mill supplies available. Designed to help purchaser in grouping his orders to greatest advantage.—ATKINSON, HASERICK & CO., Boston, Mass.

13. BROCHURE describing financial service to speed turnover of working capital; credit service for sales expansion and credit loss elimination.—WILLIAM ISELIN & CO., INC., New York, N. Y.

14. TEXTILE WEIGHT CONTROL—Forms 2009 and 2010, showing how Toledo Printweight weight records cut costs by eliminating human errors at the scales. Special purpose scales for the textile industry fully discussed.—TOLEDO SCALE CO., Toledo, Ohio.

16. TEXTILE RESEARCH — Booklet describing Research Department's commercial scale facilities for cotton spinning, worsted spinning, etc. Explains organization and functions of Department.—AMERICAN VISCOSE CORP., SYLVANIA DIV., New York, N. Y.

PLANT AND PLANT MAINTENANCE . . .

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. HUMIDIFICATION, EVAPORATIVE COOLING—Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., Providence, R. I.

107. FINNELL SCRUBBERS—Illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

108. MAPLE FLOORING — Booklet describing finishing of Northern Hard Maple Flooring—list of M.F.M.A.-approved heavy-duty floor finishes. — MAPLE FLOORING MANUFACTURERS ASSOCIATION, Oshkosh, Wis.

110. BASIC TOOLS FOR MAINTENANCE—Two-page brochure covering the uses of the Kent Wet Scrubber and Kent Electric Floor Machine; Dry Suction Machine; D-20 Dry Scrubber and illustrating them.—THE KENT COMPANY, INC., 274 Canal St., Rome, N. Y.

112. TEXTILE TRUCKS—Brochure describing vulcanized fibre textile trucks, engineered by materials handling experts. Types fully discussed. — J. C. PADDOCK CO., Spartanburg, S. C.

115. ATOMIZER HUMIDIFIER — Recent issue of "Parks' Parables" on Turbomatic self-cleaning humidifiers, and automatic regulation. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

118. "PARKS PARABLES"—Recent issue on Parks Turbo Traveling Cleaners for spinning, winding and warping. Type C.T.O. "Up Draft" cleaners keep overhead and ceilings free from fly and lint.—PARKS-CRAMER CO., Fitchburg, Mass.

119. MOPPING EQUIPMENT—Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., Chicago, Ill.

121. STEAM GENERATORS—Bulletin F-1 describes compact, package type boiler for heating, power, or processing. Described as fully automatic, firing all liquid or gaseous fuels.—THE CYCLOTHERM CORP., Oswego, N. Y.

135. SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C46, Wilmington, Dela.

138. MAGNESIUM IN THE TEXTILE INDUSTRY—Illustrated booklet on properties of magnesium for spinning, twisting, winding, knitting machines, looms, beams, spools, bobbins.—ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES—Illustrated Booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS' SONS, INC., Cedar Grove, N. J.

152. AIR CONDITIONING FOR THE TEXTILE INDUSTRY—40-page illustrated book covering air conditioning from humidity control to complete refrigerated conditioning with installations, charts, covering ABC's of cooling textile mills.—CARRIER CORP., Syracuse, N. Y.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, Minneapolis 11, Minn.

163. LAWLOR FLOOR MACHINES—Illustrated pamphlet containing specifications and describes All-Purpose Floor Machine.—THE SELIG COMPANY, Atlanta, Ga.

164. ECONOMY IN DRY SCRUBBING—Booklet describes Floroseal—Florione "dry" maintenance system—reduce consumption of seal and steel wool.—THE SELIG CO., Atlanta, Ga.

170. WHY IT PAYS TO ANCHOR YOUR TEXTILE MACHINES WITH UNISORB—Illustrated booklet discussing control of vibration and noise and how UNISORB reduces maintenance costs.—THE FELTERS CO., Boston, Mass.

173. BLOWERS AND EXHAUSTERS—Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., Buffalo 5, N. Y.

179. BETTER WAYS—Form 2020, condenser catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Toledo, Ohio.

183. WHERE ARE YOUR FLOORS?—This piece of literature covers the various sizes of Kent floor machines which are available for polishing, waxing, buffing, scrubbing, steel wooling and light sanding.—THE KENT COMPANY, INC., 274 Canal Street, Rome, N. Y.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

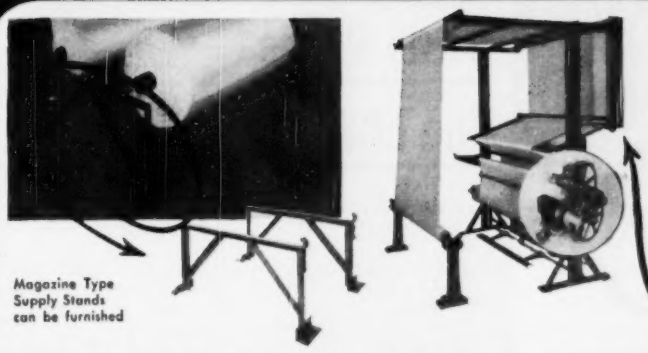
204. G-E MOTORS—Bulletin GEA-5336 contains information on the new line of life-time lubricated, unit-bearing FHP motors.—GENERAL ELECTRIC COMPANY, Schenectady 5, N. Y.

208. AUTOMATIC PRODUCTION CONTROL—Bulletin GN-487 on automatic speed control of many machines and processes through Variable Speed Equipment with mechanical and hydraulic automatic controls. Contains many illustrations, drawings and complete description of many applications.—REEVES PULLEY COMPANY, Columbus, Ind.

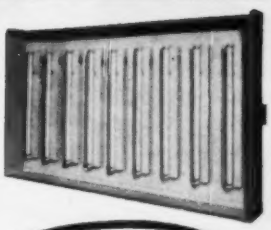
211. JOHNSON BRONZE CATALOGUE NO. 460—Shows over 850 sizes of cast bronze bushings, 500 sizes of UNIVERSAL Bronze Bars and over 200 Electric Motor Bearings.—JOHNSON BRONZE COMPANY, New Castle, Penna.

212. GATES TEXTILE ACCESSORIES—Showing the increased efficiency an economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions.—THE GATES RUBBER COMPANY, Denver, Colo.

"Standard" CLOTH INSPECTING, MEASURING AND WINDING MACHINES



Magazine Type Supply Stands can be furnished



Standard Fluorescent Lighting Fixture connected to our Cloth Inspecting, Measuring and Winding Machine.

The New Standard Cloth Inspecting, Measuring and Winding Machines are equipped with V-Belt Variable Speed Drive, manually controlled, which provides variation in yardage speeds from 11 yards per minute to 57 yards per minute. Inspection board is adjustable to any height and angle desired. All moving parts have replaceable bearings.

Our Fluorescent Lighting Fixture provides 24-hour daylight. Increases efficiency, eliminates eye strain and steps up production. There is an even distribution of light, without glare. 9 Fluorescent tubes are controlled by 4 toggle switches, perfectly diffused by indestructible, white opal Plexiglas. You can have as little or as much light as the particular fabric requires.

STANDARD MILL SUPPLY

PAWTUCKET, R. I. 1064-1080 Main Street

NEW YORK, N. Y. 6708 Empire State Bldg.

CHARLOTTE, N. C. 2319 Hutchison Ave.

MILL MEN:
THINK OF IT... *Continuous FULL SPEED Production*

NEW ROLLS SEWED ON WITHOUT STOPPING

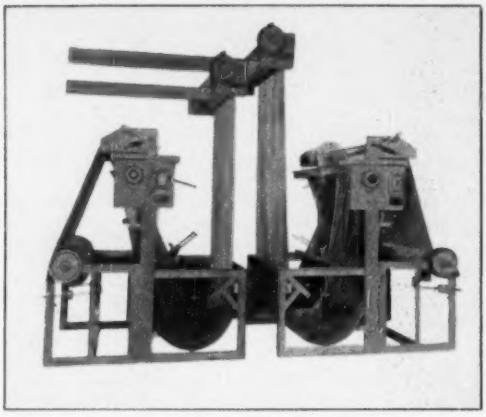
Mount Hope CONTINUOUS ROLL FEEDS

Maintain Full Speed Operation on All Roll Fed Machines

CUT COSTS

1. **Save Labor** — One man or woman can easily change and sew on new roll.
2. **Save Time** — Machine continues to run at full speed while roll is changed.
3. **Save Cloth** — Eliminates costly cloth damage due to machine stoppage.

MOUNT HOPE CONTINUOUS ROLL FEEDS are adaptable to practically any continuous feeding requirement. For further information write for Bulletin CRFI or a Mount Hope Engineer will be glad to advise you.

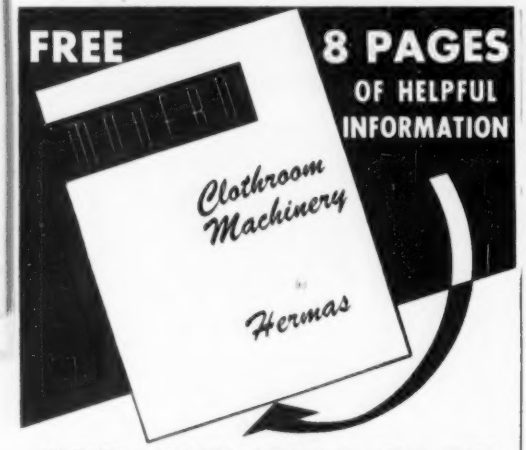


Typical installation ahead of printing machine. Shown are two continuously full Scray units with adjustable sides and fronts, standard center bar let-off and automatic stop control. One carries white goods, the other, back greys — feeding print machine continuously. Accurately controlled tension of the goods is supplied at the delivery end of Scray by use of two Mount Hope Open Width Tension Devices. (See top of picture)

MOUNT HOPE MACHINERY CO., 15 FIFTH STREET, TAUNTON, MASS.

Representatives: Parkman Collins Company, Boston—for Maine • Ingalls Engineering Company, Providence—for Mass., R. I., and Conn. • John H. Andresen, Inc., Paterson—For Southeastern N. Y., N. J., and Pa. • A. B. Julin, Watertown, New York—for Northern and Western N. Y. • Slaughter Machinery Company, Charlotte—for the South • S. S. Wilson, 1737 Howard St., Chicago—for Mid-West • Sidney Springer, Los Angeles—For California • W. J. Westaway, Ltd., Hamilton and Montreal—for Canada.

FREE



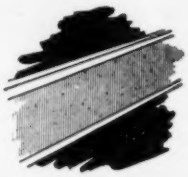
FOR YOU WHO PLAN FOR MORE EFFICIENT CLOTHROOM OPERATION

It tells you how to get better, faster clothroom production, cleaner fabrics, reduces waste of materials, eliminates inaccurate measuring of cloth, and improves working conditions.

Write today for booklet "M".

HERMAS MACHINE COMPANY
223 Warburton Ave. Hawthorne, N. J.

Salvage Your Rusty Reeds The LOW-COST Oakite Way



Reduce reed-replacement costs by derusting your reeds with Oakite Compound No. 36.

This mildly acidic compound thoroughly removes light rust deposits. At the same time, it provides a protective phosphate coating that serves to ward off rust attack.

Send for the FREE Oakite "66" Digest. You'll find it a most valuable guide for saving money on this and 65 other maintenance cleaning jobs. Oakite Products, Inc., 26C Thames Street, New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. & Canada

213. ELECTRICAL SPECIALISTS—Catalog No. S863, 64 pages, lists manual and magnetic motor control and accessories, safety switches, Multi-Breakers and electrical specialties.—CUTLER-HAMMER, INC., 301 N. 12th St., Milwaukee 1, Wis.

215. INCREASE PRODUCTION, CUT MAINTENANCE—New four-page booklet describes oilers, fuses, fuse pullers, "Kuplok" clamps for fuse clips and test clamps.—TRICO FUSE MFG. CO., Milwaukee 12, Wis.

216. LEATHER BOOKLET NO. 202—Attractive book illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Check Straps, Solid Round Leather Belting, Flat Belting.—CHAS. BOND CO., Philadelphia, Pa.

219. ROLLER CHAINS & SPROCKETS—Data Book No. 1937-A describes the Link-Belt Silverlink precision steel roller chain. Can be used on short centers at high ratios; can be applied to small fractional horsepower machines or to units involving more than a thousand horsepower.—LINK-BELT COMPANY, 307 N. Michigan Ave., Chicago, Ill.

220. MOTOR SELECTION—Booklet B-3075-C on different types of fractional horse power motors, and factors in selection of right motor for the application. Large chart gives complete data on small motors, horsepower, speed, torque, etc.—WESTINGHOUSE ELECTRIC CORP., Pittsburgh, Pa.

238. LEATHER BELTING CALCULATOR—Handy and attractive calculator for determining belt, speeds, horsepower per inch of belt widths, etc., will be sent free on request.—J. E. RHOADS & SONS, Philadelphia, Pa.

240. LEATHER BELTING—Illustrated booklet on how to select, install and maintain leather belting. Efficient transmission performance, with minimum maintenance, and maximum service life described.—SOUTHERN BELTING CO., Atlanta, Ga.

244. TEXACO SPINDURA OILS—Folder on lubrication for all types of spindles, based on actual tests.—TEXAS CO., New York City.

263. NEEDLE ROLLER BEARING—Catalog Engineering and Application Data Edition 32 contains full data on selection of proper Needle Roller Bearings and outlines uses of such in various commodities including textile uses, types, installations, lubrication, etc. — TORRINGTON COMPANY, Torrington, Conn.

264. NEW DEPARTURE SHOP MANUAL—Illustrated catalog showing ball bearing mounting and maintenance practice. Covers storage, cleaning lubrication, types of bearings.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

265. INTERCHANGEABLE BALL BEARING FOR REPLACEMENT—Charts showing numbers used by manufacturers to identify bearing characteristics, also information on specifications.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

271. CARDING, SPINNING AND WEAVING LUBRICATION—Informative bulletin describing advantages of NON-FLUID OIL over ordinary lubricants for the lubrication of carding, spinning and weaving machinery.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

278. NYATT ROLLER BEARINGS—A 16-page bulletin giving details of the application of roller bearings to all types of textile machinery.—HYATT BEARINGS DIV., General Motors Corp., Harrison, New Jersey.

276. SPEED CONTROL—Bulletin 20B6051G describes Texrope variable speed drives. — ALLIS-CHALMERS MFG. CO., Milwaukee 2, Wis.

283. CONTINUOUS OIL GROOVER—Bulletin available describing this unit which provides fast, accurate grooving on bearings of every size and type. Maximum production at a minimum unit cost discussed.—THE WICACO MACHINE CORP., Philadelphia 44, Pa.

INSTRUMENTS, STEAM SPECIALTIES . . .

309. TIME SAVED WITH STEAM CLEANING—Illustrated folder enumerates the important time, cost and work economies obtainable with steam-detergent cleaning, lists specific job applications of this method in textile mills.—OAKITE PRODUCTS, INC., New York 6, N. Y.

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices. — THE JOHNSON CORP., Three Rivers, Mich.

303. PROCESS CONTROL EQUIPMENT—New textile catalog contains brief descriptions of standard and special process control equipment engineered for textile industry. Includes schematic diagrams.—MASON-NEILAN REGULATOR CO., Boston, Mass.

307. THERMOMETER AND PRESSURE GAUGES—Catalog 6705-B and 6706 give data on both circular and rectangular case pressure type thermometers for indicating, recording and controlling processing operations in textile industry. — MINNEAPOLIS-HONEYWELL INDUSTRIAL DIV., Philadelphia, Pennsylvania.

311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips. — CRANE CO., Chicago, Ill.

314. MOISTURE CONTENT CONTROL—Bulletin F-1705-1 giving details of features and benefits of moisture equipment control for slashers and textile applications. — BARBER-COLMAN CO., Rockford, Ill.

315. CONTROL INSTRUMENTS FOR TEXTILE PROCESSES—32-page illustrated booklet describing controls for such processes as slashing, dyeing, bleaching, kier boiling, drying, air-conditioning, etc. — MINNEAPOLIS-HONEYWELL INDUSTRIAL DIV., Philadelphia, Penna.

316. HYDRAULIC POWER UNITS—Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—B. F. PERKINS & SON, INC., Holyoke, Mass.

319. GUIDE TO CORRECT INSTRUMENT SELECTION—The completely revised edition gives a comprehensive bird's-eye view of the companies' entire instrument line. Bulletin 28170. — TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

326. RECORDING VISCOMETERS—Bulletin V-1000B, describing equipment for manual or automatic viscosity control of sizing operations in the textile field.—NORCROSS CORP., Newton, Mass.

324. STROBOTAC—Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

CARDING, SPINNING, WINDING . . .

400. THE TRAVELER—Booklet on ring travelers published quarterly with a technical article on spinning and twisting of interest to mill men.—VICTOR RING TRAVELER CO., Providence, R. I.

401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking.—ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

403. WINDING MACHINES—Principles and Practices—This series available in booklet form for those in the industry who desire copies.—UNIVERSAL WINDING CO., Providence, R. I.

404. LAPLESS ENDLESS SPINNER—Bulletin and full information will be supplied on lapless endless spinner and coning belting.—TON-TEX CORPORATION, 16 West 61st St., New York, N. Y.

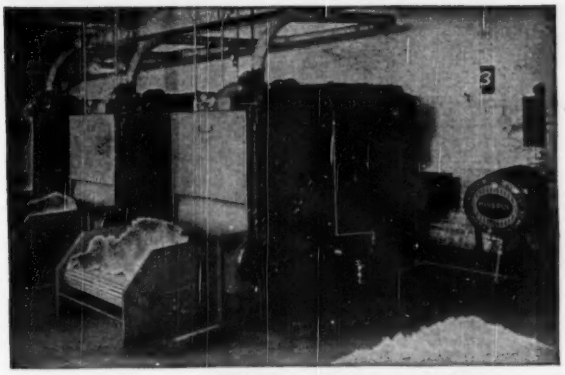
408. CARD GRINDING INFORMATION—Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.—R. K. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

412 SERVICE FOLDER—Folder covers textile metal products including spinning and twisting cylinders, card screens, etc.—JENKINS METAL SHOPS, INC., Gastonia, N. C.

413. SONOCO PRODUCTS—A 54-page illustrated booklet giving description, specifications and charts of the many Sonoco products, including bobbins, cones, tubes, cork cots, roving cans, spooling rolls, etc.—SONOCO PRODUCTS CO., Hartsville, S. C.

MINEROL

FIRST and FOREMOST CONDITIONING AGENT for Textile Fibres.



● **MINEROL** is a prepared agent for conditioning textile fibres..a systematic Process of Spraying Natural and Dyed Raw Stock. • **MINEROL** helps to separate long fibres from the short. It saves *good fibres* and prevents waste. It makes fibres more supple..more pliable. • **MINEROL** provides *control* of conditions caused by static electricity. It protects the cards and preserves the wire. • **MINEROL** prevents Dust and Fly..safeguarding health and insuring better working conditions. • **MINEROL**..as a conditioner is more urgently in demand thru the increased use of staple Cut Rayon and its varied combinations with cotton, wool and other fibres.

BRETON MINEROL PROCESS PATENTED

BORNE SCRYMSER COMPANY

Originators of the BRETON MINEROL PROCESS for CONDITIONING FIBRE

ELIZABETH, N. J. *Established 1874* CHARLOTTE, N. C.

NEW ENGLAND REPRESENTATIVES

A. M. KNIGHT, West Yarmouth, Mass. — W. M. DYNES, West Springfield, Mass. — S. T. DOUGLAS, JR, Westwood, Mass.

SOUTHERN REPRESENTATIVES

W. E. SMITH, Charlotte, N. C. — JOHN FERGUSON, LaGrange, Ga. — CHARLES KELLEY, Charlotte, N. C.

Lubrication is the Lifeblood of Twisting Spindles

and

The WICACO SPINDLE OILING MACHINE GUARANTEES PROPER LUBRICATION!

IT flushes out the old oil and replaces it with fresh oil in one simple operation. It saves time, labor and power, and guarantees proper oil level at all times.

This machine is used successfully in many mills producing wool, cotton, silk and rayon.

Send for Descriptive Folder Now.

SINCE 1868

WICACO MACHINE CORPORATION

WAYNE JUNCTION, PHILA. 44, PA.

Manufacturers of Precision Machinery and Machine Parts

AMERICAN SUPPLY COMPANY
78 Fountain Street, Providence, R. I.

MR. RALPH GOSSETT
8 South Church Street, Greenville, S. C.

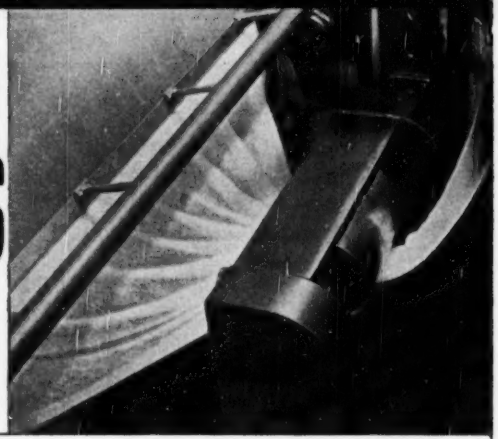
OTHER AGENTS
in Foreign Countries

10.000.000 CARDING POINTS NEED PERFECT GRINDING ROLLS

CONSULT THE CARD-GRINDING SPECIALISTS

DRONSFIELD'S

TRAVERSE WHEEL GRINDER Nº 120



SOLE AGENTS FOR DRONSFIELD'S MACHINERY :-

JOHN HETHERINGTON & SONS INC.
BOSTON · MASS

SOLID GRINDING ROLLER Nº 112

DRONSFIELD BROTHERS LTD · OLDHAM · ENGLAND

414. **WORSTED SPINNING**—Bulletin explaining and illustrating Saco-Lowell's new system for worsted spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

415. **THE BRIEF SAGA OF THE RING TRAVELER**—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of the ring traveler, the development of the spindle and the invention of Rabeth's Bolster type spindle are covered.—NATIONAL RING TRAVELER CO., Pawtucket, R. I.

417. **SAGA OF THE RING TRAVELER**—Part II of this interesting history is now available.—NATIONAL RING TRAVELER CO., Pawtucket, R. I.

419. **TEXTILE APRONS**—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

420. **AUTOMATIC FILLING WINDING**—Eight page, two color booklet describing the operation and mechanism of the Hacoba winder.—ATKINSON, HASELTICK & CO., 211 Congress St., Boston, Mass.

422. **MODERN TEXTILE ROLL COVERING**—Illustrated booklet on roll covering problems with charts on correct usages. Also data on Acetex long draft aprons.—ARMSTRONG CORK CO., Industrial Division, TEXTILE PRODUCTS SEC., Lancaster, Pa.

423. **TEXTILE SHEET METAL PRODUCTS**—Folder on cylinders, card screens, lickerin screens, repair work.—JENKINS METAL SHOPS, INC., Gastonia, North Carolina.

426. **PNEUMATIC ROLL PICKER**—Attractive bulletin descriptive of the "Amoskeag roll picker that removes fly and lint from the top rolls and other drafting elements in spinning and roving frames.—M-B PRODUCTS, Detroit, Mich.

432. **PRECISION TEXTILE WINDING**—Bulletin on Kidde Tension and Density Control for winding rubber.—WALTER KIDDE & CO., INC., Belleville, N. Y.

435. **MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER**—Booklet containing maintenance data for calibration of Scott Testers, clamps for testers, gear-box lubrication, and recording.—SCOTT TESTERS, INC., Providence, R. I.

437. **SPINDLE TAPE LACING EQUIPMENT**—Circular No. 54 illustrating and describing the Clipper method of joining spindle tapes.—CLIPPER BELT LACER CO., Grand Rapids 2, Mich.

440. **SADDLES**—Leaflet showing a few of the over 400 different types of saddles for both conventional and long draft spinning and roving frames.—DIXON LUBRICATING SADDLE CO., Bristol, Rhode Island.

441. **SKF BALL BEARING TENSION PULLEY FOR SPINNING FRAMES**—Attractive illustrated folder outlining the value of anti-friction bearing Tension Pulleys for all types of spinning frames.—SKF INDUSTRIES, INC., Philadelphia, Pa.

443. **COMPARATIVE YARN TABLE**—Chart giving woolen number (cut and run system), also cotton worsted and metric system; also, Comparative Rayon Denier Yarn Table.—VICTOR RING TRAVELER CO., Providence, R. I.

445. **ROLLER BEARING SPINDLES**—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described.—THE MARQUETTE METAL PRODUCTS CO., Cleveland, Ohio.

446. **WINDING MACHINES**—Principles and Practices is the title of Bulletin No. 339, Part 2 on the No. 44 Roto-Coner is profusely illustrated with exploded view drawings with charts and tables relative to drum winders.—UNIVERSAL WINDING CO., Providence, R. I.

447. **CONE WINDER**—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

448. **TURBINE LUBRICATION**—Problems of oxidation, emulsification, foaming and sludging as related to turbine lubrication discussed in folder entitled "Turbo-Drive".—E. F. HOUGHTON AND CO., Philadelphia, Pa.

454. **CARD AND PICKER BEARINGS**—Four-page, two-color folder which describes this manufacturer's ball and roller bearings for cards and pickers.—SOUTHERN STATES EQUIPMENT CORP., Hampton, Ga.

455. **NYLON SPINNING BANDS**—Brochure describing "Blue Jay" bands made from Du Pont nylon, for spinning, carding, twisting, and spooling. Longer life, less slippage, no loading of lint, and not affected by oil or moisture discussed with controlled stretch performance described.—TEXTILE BANDING CO., Athens, Ga.

457. **DRAWING-IN**—Bulletin H.I.-1 on the Titan Automatic Heddle Indicator—eliminates human error in "drawing-in" operation and economies discussed.—EDDA INTERNATIONAL CORP., New York, N. Y.

458. **CONICAL RINGS AND FLYERS**—Special data available on the Ilvey conical rings and flyers.—ILVEY MANUFACTURING CO., INC., Buffalo 2, N. Y.

WEAVING, SLASHING . . .

502. **TEXTILE COUNTERS**—Catalog T-48 describing pick counters for looms, hank counters for spinning, yardage counters for cloth room, etc.—VEEDER-ROOT, INC., Hartford, Conn.

507. **SLASHER PRODUCTION**—ON-488, new bulletin on slasher production, describing how quality yarn can be improved through the use of this company's variable speed equipment to automatically control and regulate the speed of the main drive, beam drive and stretch control of the slasher.—REEVES PULLEY COMPANY, Columbus, Ind.

508. **LOOM PRODUCTION CHARTS**—Convenient celluloid card showing yards per loom per week of 44 hours at various loom speeds.—RALPH E. LOPER CO., Greenville, S. C.

510. **THE ROMANCE OF PRAIRIE GOLD**—Attractive illustrated book which tells the story of corn and the uses of corn products in industry.—CORN PRODUCTS SALES CO., New York, N. Y.

513. **SEYCO PENETRANTS FOR YARN CONDITIONING**—Folder describing the scientifically formulated Seyco sizing. — SEYDEL-WOOLLEY & CO., Atlanta, Ga.

515. **TEXTILE COUNTER**—Catalog No. 56 illustrating and describing complete line of Production Loom Pick Counters; Hank Counters; Yardage, Electric and Predetermined Counters; Tachometers, etc. — DURANT MANUFACTURING CO., Milwaukee 1, Wisconsin.

516. **WEAVE ROOM ACCESSORIES**—Weave-room accessories catalog and literature on new plastic bronze bearing sheave, which solves a troublesome weave room problem.—EMMONS LOOM HARNESS COMPANY, Lawrence, Mass.

517. **LOADING SYSTEM**—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photographs, specifications, and prices.—THE FOXBORO COMPANY, Foxboro, Mass.

518. **NIAGARA TWIST-SETTER**—Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. This yarn is sprayed from all sides to afford maximum economy.—SEYDEL-WOOLLEY & CO., Atlanta, Ga.

519. **WOODEN BEAM HEADS, WARPER BEAMS, AND WARPING MACHINERY FOR ALL FIBERS**—62-page illustrated booklet descriptive of and giving specifications for the Allen line of beam heads, warper beams, warping machinery, slasher motions and cloth rolls.—ALLEN COMPANY, New Bedford, Mass.

521. **STEEL WARP BEAMS**—36 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, INC., Milton, Pa.

523. **OVERHEAD MOUNTS FOR BIGGER LOOM BEAMS**—Folder illustrating and describing how bigger beams can be adapted under all mill conditions, includes handy Multiplier Table showing increased yarn capacity possible with bigger beams.—WEST POINT FOUNDRY & MACHINE COMPANY, West Point, Ga.

524. **JOHNSON WARP SIZES**—12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point-by-point analysis.—CHARLES B. JOHNSON MACHINE WORKS, Paterson, N. J.

528. **PARTS CATALOGS FOR WPFAM SLASHERS, SIZE KETTLES AND PUMPS**—This 42-page illustrated catalog of parts, contains exploded views and part numbers for quick identification.—WEST POINT FOUNDRY & MACHINE COMPANY, West Point, Ga.

529. **STRAPPING**—Looms and harness strapping, complete line. Full information supplied on request.—PON-TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

530. **ROTARY UNIONS**—New catalog shows how to cut costs, get better sealing on can dryers, slashers, calenders, etc. Catalog No. 200 entitled "Where Good Connections Count."—PERFECTION SERVICE COMPANY, Atlanta Ave., Charlotte, N. C.

531. **EVENNESS TESTER**—Folder explaining how this Tester takes the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION, Charlotte, N. C.

532. **DRYING CYLINDERS**—Bulletin No. 2 describes how to reduce warming-up time on slashers, dry cans, and other textile drives. New system of air venting and draining rotating cylinders described.—RABCO CO., INC., New York, N. Y.

DYEING, FINISHING, CLOTH ROOM . . .

509. **BIOLOGICAL ASPECTS OF INSECT DAMAGE TO WOOL**—Booklet giving complete picture of insect damage to wool from biological standpoint.—GEIGY CO., INC., New York 6, N. Y.

502. **ALUMINUM IN THE CHEMICAL INDUSTRY**—Published by Aluminum Company of America. Seventy-eight pages. Text and illustrations covering adaptability of aluminum and aluminum alloys to chemical industry applications and characteristics governing recommended uses.—ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.

504. **STABILON**—For Naphtol Dyeing and Printing—reduces cracking and brightens Naphtol shades by stabilizing fast color salts and bases. Prevents premature decomposition of stock feeder solutions and print paste—fully discussed in booklet available.—AMERICAN ANILINE PRODUCTS, INC., New York, N. Y.

505. **CONTINUOUS AUTOMATIC EXTRACTING MACHINE**—Folder describing the most efficient method of extracting excess liquid from fibrous materials.—C. G. SARGENT'S SONS CORP., Graniteville, Mass.

510. **PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY**—Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Preboarding and Automatic Boarding Machines for hosiery.—PROCTOR & SCHWARTZ, INC., Philadelphia, Pa.

511. **BRUSHING AND SHEARING MACHINES**—Illustrated literature on the new Hermes Brushing Machine for use light or heavy cloths; also on Hermes AV Shears.—HERMAS MACHINE CO., Hawthorne, N. J.

513. **RADIANT HEAT IN TEXTILE INDUSTRY**—New illustrated book on use of radiant heat, data on fuel consumption, evaporation, etc. — RED-RAY MFG. CO., New York, N. Y.

514. **STRIPS IN ROLLS**—Form No. CF-462 Illustrated folder showing over 25 slitters and roll winders for textile use.—CAMERON MACHINE CO., Brooklyn, New York.

515. **ENGINEERING PROPERTIES OF MONEL**—Technical Bulletin T-7, giving detailed information on strength and ductility, working properties, resistance to various types of corrosion and other data on Monel Metal.— INTERNATIONAL NICKEL CO., INC., New York, N. Y.

517. **AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING**—Illustrated folder describing the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

522. **FILT-R-STIL**—Attractive illustrated booklet describing the FILT-R-STIL method of chemically purifying water.—AMERICAN CYANAMID & CHEMICAL CORP., New York 20, N. Y.

524. **STRAIGHTENING THE WEFT IN CLOTH**—Article describing the progress made in this field and latest machinery available for both skewed and bowed weft straightening.—MOUNT HOPE MACHINERY CO., Taunton, Mass.

525. **BALL BEARING ROLLER TYPE SCRAY**—Circular No. 504 describing the scray which is for use in handling heavy and large size rolls of cloth. This is used either in finishing plants or in the cloth room of cotton mills.—BIRCH BROS., INC., Somerville, Mass.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 893, SEC. 34.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 5, GA.

627. SINGLE APRON STOCK DRYERS—Folder presenting the latest idea in automatic drying which every mill having drying problems can profitably use in most modern manufacturing conditions.—C. G. SARGENT'S SONS CORP., Graniteville, Mass.

630. VAT DYEING OF WOOL—Write for Calco Technical Bulletin No 797 outlining fundamental dyeing procedure, and explaining new advances in the technology of wool dyeing and finishing.—CALCO CHEMICAL DIVISION, AMERICAN CYANAMID CO., Bound Brook, N. J.

632. LUG STRAP WASHERS—Series 1-C illustrated bulletin detailing right and wrong application and use of washers.—E. H. JACOBS NORTHERN DIVISION, Danielson, Conn.

633. PRINTING WITH ARIDYE PIGMENT COLORS—Bulletin P-1 describes preparation and application of pigment water-in-oil emulsions for printing cotton, rayon and other fabrics.—INTERCHEMICAL CORP., TEXTILE COLORS DIV., Hawthorne, N. J.

DYESTUFFS, CHEMICALS, SOAPS . . .

706. THEORETICAL AND APPLIED SILK-SOAKING—Attractive 23-page booklet outlining methods of silk-soaking and outlining investigation on the soaking, back-winding and degumming of silk.—HART PRODUCTS CORP., New York City.

710. HERCULES PINE OILS—Leaflet briefly describing advantages of using this manufacturer's oil in wet-processing of textiles.—HERCULES POWDER COMPANY, Wilmington, Del.

712. VANDERBILT MATERIALS—Available is a 6-page booklet describing non-toxic fungicides, and their use in textile operations.—R. T. VANDERBILT CO., INC., New York, N. Y.

713. LIQVATINE ED—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, New York City.

718. AQUAROL AND ARKANSAS PRODUCTS—Bulletins on Aquarol water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and rayon, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

717. FINISH KB—Finishing compound designed as binder in combination with filling and stiffening compounds. Avoids dusting, insures draping qualities.—SANDOZ CHEMICAL WORKS, New York.

720. SYNTHETIC FIBERS — Attractive folder briefly describing the company's products used in the manufacture of synthetic fibers.—HERCULES POWDER COMPANY, Wilmington, Del.

738. LEVELENE—Booklet describing use of *Levelene* for leveling vat and direct colors. Also for stripping down vat colors.—AMERICAN ANILINE PRODUCTS, INC., New York, N. Y.

745. RAPIDASE FOR DESIZING—Bulletin explaining in detail the properties and characteristics of Rapidase.—WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

755. LUPOMIN—Leaflet outlines the advantages of the cation active softener which is suitable for use on cotton, linen, silk, wool, synthetic fibers and mixed fabrics. A small percentage of Lupomin gives a supple, smooth hand.—JACQUES WOLF & CO., Passaic, New Jersey.

756. TEXTILE SPECIALTIES—Listing and describing a wide and complete range of specialties manufactured and sold by American Cyanamid Company formulated to the latest advances in textile chemistry.—AMERICAN CYANAMID COMPANY, 30 Rockefeller Plaza, New York 20, N. Y.

762. ONYX TECHNICAL DATA SHEETS—Two new data sheets describing the use, advantages and applications of Xyno Resins S 69 and Xyno Resin 2862.—ONYX OIL & CHEMICAL COMPANY, Jersey City 2, N. J.

765. HOSIERY FINISHES AND FORMULAS—Attractive new booklet describing the Amalgamated line of hosiery finishes and giving numerous finishing formulas.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 34, Pa.

766. DU PONT PEROXIDE BLEACHING SYSTEMS—New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included.—E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

769. SURFACE TENSION DEPRESSANT—The Booklet, "Mercerizing and Alkanerce—The Ideal Dry Mercerizing Penetrant," introduces a new product which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing.—HART PRODUCTS CORP., New York, N. Y.

771. "STARCH STABILIZER" — Folder on Vanesta, a product used for textile sizing and printing, discussing stabilization and the results obtained.—R. T. VANDERBILT CO., New York 17, N. Y.

773. TECHNICAL CHEMICAL DATA SHEETS—Complete set for dyeing, printing and finishing operations, showing major operations, performance and advantages.—ONYX OIL & CHEMICAL CO., Jersey City 2, N. J.

774. BOYCE TEXTILE CHEMICALS—This booklet briefly describes the leading Boyce products for textile processing, printing, dyeing and finishing.—BOYCE CHEMICAL COMPANY, Carlton Hill, N. J.

775. CAUSTIC SODA—Bulletin No. 6, an 80-page technical bulletin, is the latest in Solvay's well-known series. The text is profusely illustrated with photographs, tables, graphs and diagrams.—SOLVAY SALES DIVISION, 40 Rector Street, New York 6, New York.

776. SERIZYME—Bulletin describing the properties and characteristics of Serizyme, a standardized liquid proteolytic enzyme preparation which can solubilize various types of protein substances.—WALLERSTEIN COMPANY, INC., 180 Madison Avenue, New York 16, N. Y.

777. HOSIERY DYEING—Catalog on hosiery dyeing machinery, skein dyeing machinery, package dyeing, extracting and drying equipment.—SMITH, DRUM AND CO., Philadelphia 23, Pa.

780. HYDROGEN PEROXIDE—Compilation of physical data and properties of hydrogen peroxide. Reactions listed in organic and inorganic chemistry along with applications.—BECCO SALES CORP., Buffalo, N. Y.

KNITTING . . .

800. KNITTING MACHINES—Booklets for hosiery, underwear, and outerwear. Series of illustrated booklets, each devoted to single-type circular knitting machine, full description of machine and prod uct with technical data.—SCOTT AND WILLIAMS, INC., New York, N. Y.

801. THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE—Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Penna.

803. THE TUBE-TEX FOR TUBULAR KNIT GOODS—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste.—H. W. BUTTERWORTH & SONS CO., Philadelphia.

806. STATISTICAL SURVEY—Covering the Full-Fashioned Hosiery knitting industry in the United States and Canada.—TEXTILE MACHINE WORKS, Reading, Penn.

809. TEXACO IN THE KNITTING INDUSTRY—Folder on knitting mill lubrication.—THE TEXAS CO., New York.

810. ALUMINUM BEAMS—Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types.—HAYES INDUSTRIES, INC., Jackson, Mich.

812. CIRCULAR KNITTIN GMACHINES—Interesting, informative and well illustrated is this six-page folder, just released, which describes this company's small diameter circular knitting machines.—H. BRINTON COMPANY, Philadelphia 34, Pa.

813. THE NEW REINER HIGH SPEED TRICOT MACHINE—64" knitting widths. A richly illustrated catalog describing its many novel features of construction and performance.—ROBERT REINER, INC., Weehawken, N. J.

816. THE NEW REINER KAYLOOM—A combination Knitting Weaving Loom, featured in an illustrated catalog, showing filler attachment and other important points about this machine.—ROBERT REINER, INC., Weehawken, N. J.

817. AUTOMATIC SELECTIVE STRIPPING MACHINE—Descriptive and illustrative folder, entitled "If It's Stripes, Consult Brinton," now available. Important mechanisms involved in the process are described.—H. BRINTON COMPANY, Philadelphia, Pennsylvania.

818. MILTON LIGHT METAL BEAMS FOR EVERY APPLICATION—Catalog 45-A describing Light Metal Truss Beams made in Standard and Special sizes plus Special Purpose Light Metal Textile Equipment.—MILTON MACHINE WORKS, INC., Milton, Pa.

820. VARIABLE STRIPES AND PLAIDS—Booklet describing Supreme Models 8A and 8A-ROF Stripers for knitting plaids, checks, heather designs and variable stripes.—SUPREME KNITTING MACHINE CO., INC., 105 Johnson Ave., New York.

825. THE KIDDE KNITTER—Bulletin describing the newest in Raschel-type warp knitting machines and higher production attained with it.—KIDDE MANUFACTURING CO., INC., Bloomfield, N. J.

SEWING MACHINES . . .

904. CONDENSED CATALOGUE — A 40-page pocket-sized booklet illustrating and describing sewing machines adaptable for practically all phases of the needles trade.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

915. THE NEW UNION SPECIAL LOCKSTITCH MACHINE—Information on the new model which cuts production time on sewing operations is contained in Bulletin No. 258.—UNION SPECIAL MACHINE CO., Chicago 10, Ill.

912. ELASTIC HEMMING AND INSERTING MACHINES—Bulletin No. 833, illustrating and describing the improved high speed machine Style 392-5, for work on undergarments, blouses, sashes, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

MATERIALS HANDLING . . .

1001. HOW TO DETERMINE WHERE OVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY — Profusely illustrated. Gives clear, concise understanding of materials handling. Helps you to determine where and what equipment might be used to speed production and increase profits.—CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1002. CATALOG NO. 22—An attractive illustrated catalog describing in detail the Shamrock folding containers and the new canvas trucks for textile use.—MEESE, INC., Madison, Ind.

1003. CASTERS AND WHEELS—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

1006. LANE CANVAS BASKETS—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT — 56 pages of illustrations showing successful applications of monorail systems to many kinds of handling problems.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

1008. CASTERS AND WHEELS—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1009. CANVAS PRODUCTS—A complete listing with illustrations of Dandux Canvas Products. For easy fingertip reference and handy file size. Brief but factual information.—C. E. DANIELS, INC., Daniels, Md.

1010. CONVEYOR KEY BOOK—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well-illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results.—LOGAN COMPANY, INC., Louisville, Ky.

1027. SINGLE-BEAM CRANES—Bulletin No. 130 describing and illustrating the single beam type of overhead traveling crane.—SHAWMUT ENGINEERING AND HOIST CORP., Montour Falls, N. Y.

1030. C-D HOLLOW WARE—This 32-page catalog, R-11, profusely illustrates and describes Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 38, Del.

MISCELLANEOUS . . .

1101. AUTOMATIC BOBBIN REFINISHER—A descriptive bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule.—J. M. NASH COMPANY, 2300 N. 30th St., Milwaukee, Wis.

1102. BALING PRESSES—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Uptroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. UNBRAKO SCREWS—Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws with knurled cup point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1104. INTERPRETATION OF ANALYSIS—In compiling this brief collection of terms which most frequently appear in analysis of surface active chemicals, an attempt has been made to explain as clearly as possible the meaning of those terms to those who have had little or no chemical training.—NOPCO CHEMICAL CO., Harrison, N. J.

1107. AUTOMATIC QUILL POLISHER—Bulletin describes production machine for refinishing loom bobbins. Tells how quills can be kept in perfect condition at minimum labor cost.—J. M. NASH CO., 2300 N. 30th Street, Milwaukee 10, Wis.

1108. FABRICATION OF U. S. STAINLESS STEELS—136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosion-resistance tables for chemicals.—CARNEGIE - ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1109. PUMPS—Catalog B-131-1 describes complete line of horizontal and vertical centrifugal pumps for every water handling service.—PEERLESS PUMP DIV., Food Machinery Corp., Los Angeles 31, Calif.

1011. TEXTILE TRUCKS—Booklet describing duff boxes, frames and trucks, yarn, waste, platforms, conditioning, steel lap, cheese quilling trucks, etc. Uses and description.—EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C.

1111. BRUSHES—A 28-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1114. SCOTCH TEXTILE TAPES—Four page brochure containing photographs and descriptive information on the many uses for pressure sensitive Scotch tapes in the textile industry.—MINNESOTA MINING & MFG. CO., St. Paul, Minn.

TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

Please send me, without obligation, free booklets or further information on New Equipment items described in the August, 1950, issue of TEXTILE INDUSTRIES.

(Fill in here numbers you select from these pages) . . . . . .

. . . . . .

. . . . . .

Name . . . . . .

Firm Name . . . . . Position . . . . . .

City and State . . . . . .

Street . . . . . .

Suppliers' News

(Continued from page 183)

elected are: J. R. Keach, a director and vice-president, and G. C. Johnson, a director.

Norman R. S. Hollies has joined the staff of **Harris Research Laboratories,** Washington, D. C., and will engage in physical and chemical investigations of high polymer systems. Before coming to Harris, Dr. Hollies was a research associate at Harvard Medical School.

Penn Industrial Instrument Corp., Philadelphia, Pa., has appointed George D. Keller as manager of its sales-engineering department.

A sales and service office has been opened by **Norcross Corp.** in the Commercial Trust Building, 15 Exchange Place, Jersey City, N. J. George Apfel is manager.

Catalin Corp. of America. New York City and Fords, N. J., has completed new plant and storage facilities at Calumet City, Ill. The new plant will produce a full range of urea resins and creams used in textile finishing as well as a wide range of urea, phenolic, melamine, and resorcinol resin formulations. Catalin has also installed large capacity, low-temperature storage tank facilities at Thomasville, N. C.

Marion A. Prowell has become associated with **Frank A. Constangy** in the practice of law, succeeding the late Legare Davis. Their office is located at 1404 Candler Building, Atlanta 3, Ga.

Raymond H. Cramer has been appointed general manager of the **Hyatt Bearings Division** of General Motors Corp. at Harrison, N. J., succeeding the late H. O. K. Meister. General Motors has also announced the closing of the Washington, D. C. office of the **New Departure Division.** The territory previously covered by that office will be served by the Philadelphia office, at 850 East Luzerne St., Philadelphia 24, Pa.

Theodore B. Hayward of Swift and Co., Philadelphia, Pa., was recently elected chairman of the board of directors of the **Philadelphia Textile Institute Corp.** Rinaldo A. Lukens of Continental Mills, Inc., Philadelphia, was elected president. Other officers are: Fred C. Scholler, Schollers Bros., Inc., first vice-president; Benjamin Gibbs, Gibbs Underwear Co., second vice-president; Julius Zieget, secre-

JOHNSON BRONZE

Ledaloyl

SELF LUBRICATING BEARINGS ARE DIFFERENT!

Made from Pre-Alloyed Bearing Bronze Powder

Ledaloyl actually means "lead alloy"... a powder metallurgy product that combines copper, tin and lead in the form of a pre-alloyed bearing bronze.

The introduction of lead as an integral part of the bronze powder provides conformability, aids lubrication, and prevents freezing to the shaft. Myriads of tiny, evenly spaced pores serve as miniature oil wells, metering oil to the shaft when in use, absorbing it when at rest. Therefore, you have adequate lubrication at all times.

Write for **FREE** *Catalog on Stock Sizes of* LEDALOYL

Johnson Ledaloyl Bearings are die-molded to size, eliminating costly machining, and consequently, are very low in cost. This is an added cost-saving advantage in odd-shaped, flanged, and self-aligning designs, and in large quantities of a size. Johnson Bronze engineers are glad to assist you in determining whether you can use Ledaloyl Bearings to your advantage. Write today!

Johnson Bronze

SLEEVE BEARING HEADQUARTERS

530 SOUTH MILL STREET • NEW CASTLE, PA.

HOW ANDERSON SHIELDS INCREASE SPINNING ROOM EFFICIENCY

Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection metal shields afford . . . Watch your spinning room efficiency increase!

TEXTILE SHIELD CO., INC.

Metal Protection for Wood Turnings

J. N. ANDERSON, Treas.
LAWRENCE, MASS., U.S.A.

it takes GOOD BEAMS to make good warps!

PROBLEM: ORDINARY BEAMS WON'T HANDLE THE PRESSURES OF NYLON AND RUBBER YARNS!

solution . . .

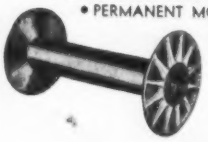
MILTON NYLON & RUBBER TRICOT BEAM

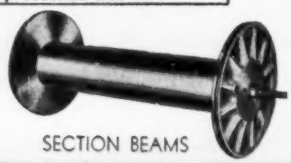
Tested and proven under actual operating conditions, here is Milton's forged head beam designed especially to withstand extreme pressures encountered when warping tremendous yardages of monofilament; fine denier, low turn nylon; and rubber yarns! Heat-treated, aluminum alloy heads and barrels permanently joined with continuous heliarc welds. Write for complete information!

• FORGED HEADS
• RIGID BARRELS

MILTON LIGHT METAL BEAMS are the result of years of close collaboration with mill production men . . .

• PERMANENT MOLD HEAD TRICOT BEAMS





SECTION BEAMS

MILTON MACHINE WORKS, Inc.
DESIGNERS — ENGINEERS — MANUFACTURERS
MILTON, PENNA.

tary and treasurer; Anthony J. Haldis, assistant treasurer; and Thomas Hyndman, solicitor.

The **Allentown Bobbin Works** has just completed an expansion and modernization program costing more than $100,000. The new facilities include a plant addition 30 x 45 feet, and enlargement and modernization of the office.

Worsted machinery manufactured by S. A. Officina Meccanica Sant' Andrea, Novara, Italy, is on exhibit in New York City, and may be inspected by appointment with **Ernest L. Frankl Associates**, U. S. and Canadian representatives, at 22 East 40th St., New York 16, N. Y.

Meese, Inc., Madison, Ind., has appointed William E. Petway as sales

Mr. Petway

representative in the states of North and South Carolina, Georgia, Alabama, and Mississippi. His headquarters will be in Atlanta, Ga.

Atlanta (Ga.) Paper Co., manufacturers of display cartons and corrugated containers, recently awarded $275 in prizes to nine winners in a cover design contest for display cartons for sheets, towels, pillow cases and other domestics. The contest was open to third year advertising students of Atlanta's High Museum School of Art.

Robert J. Wigg has replaced C. M. Keyser as sales-service representative for **The Wm. Powell Co.**, Cincinnati, Ohio, in the territory of Oregon, Washington, and Idaho. Mr. Wigg's headquarters will be at 317 Builders Exchange Building, Portland 4, Ore.

The **General Dyestuff Corp.** has moved its office and laboratory in Chicago, Ill., to 310 West Polk Street. The new location will provide greater office space and an enlarged laboratory.

F. L. Regnery Corp., Chicago, Ill., has been licensed by **Gelco Develop-**

ment Corp. of Canton, Mass., to manufacture and sell steel top aluminum spinning spindle adapters.

William A. Hewitt has been appointed southern representative for the **Manton-Gaulin Manufacturing Co., Inc.,** replacing Robert Sidebotham. Mr. Hewitt, whose headquarters will be in Greenville, S. C., was formerly associated with Corn Products Sales Co.

E. D. Powers was recently elected a vice-president of **American Cyanamid Co.** He will be in general charge of all matters concerning plant operations. Mr. Powers has been with the firm since 1918 and prior to his election was production manager.

A new research and development laboratory is being constructed for **Balassa Research Laboratories** at 59 Cove St., New Bedford, Mass. The new unit will be engaged principally in cellulose and textile research.

Square D Company has instituted a program of touring display motor coaches to present its complete line of electrical distribution and control equipment to electrical distributors and contractors, architects and builders, and large industrial plants. The two demonstration coaches will tour thirty-seven states.

The Westvaco Chemical Division of **Food Machinery & Chemical Corp.** has plans for construction of a plant at Lawrence, Kansas. It will be used for the processing of phosphorus into the usual grades of soluble phosphates used by the soap, textile, oil and chemical industries.

Frederick C. King, formerly associated with Burlington Mills, has been appointed technical representative of the synthetic fibers department, Carbide and Carbon Chemicals Division, **Union Carbide and Carbon Corp.**

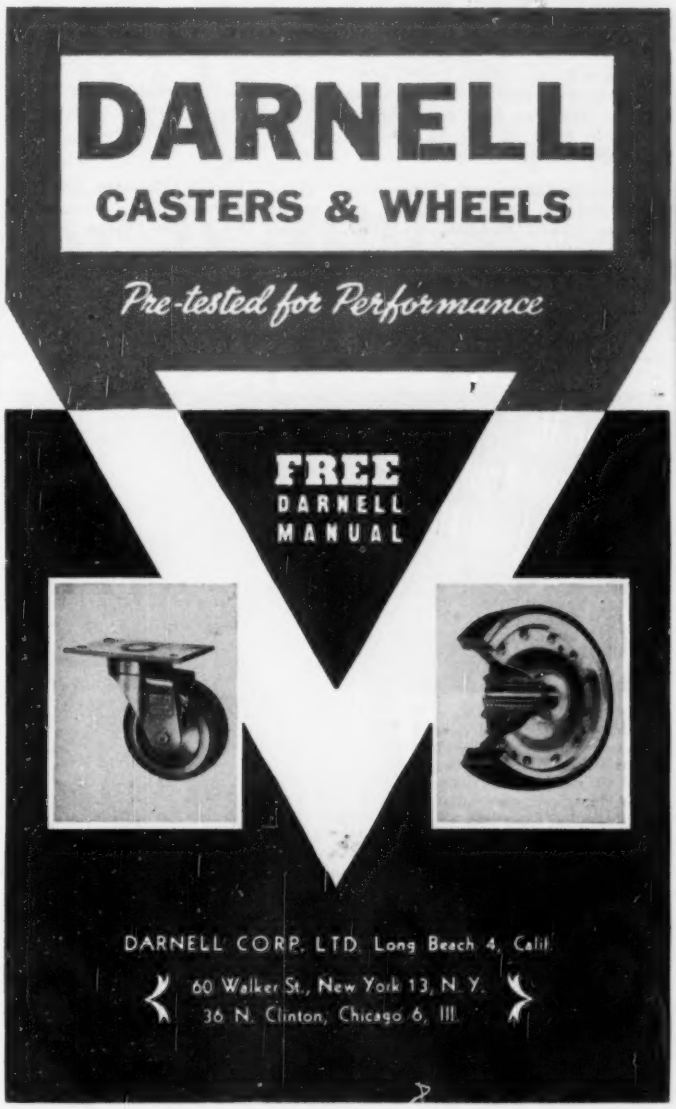
A. O. Smith Corp. recently bought Whirl-A-Way Motors, Inc., Tipp City, Ohio, as part of its program for expansion of electric motor manufacturing facilities. The Tipp City operation now becomes the eastern motor division of A. O. Smith, with D. L. Mills, former president of Whirl-A-Way, as manager. Mr. Mills also is in charge of the eastern sales and administrative offices, located at Dayton, Ohio.

Ian M. Haldane of Ian M. Haldane and Co., London, Ontario, has become associated with William C. Nairn of **Emmons Loom Harness Co.,** Lawrence, Mass., in promoting Emmons Canadian sales. Mr. Haldane will be available for consultation on matters pertaining to flat steel heddles, heddle frames, reeds, etc.

George O. Linberg, vice-president of AATCC and formerly associated with Monsanto Chemical Co. in the textile chemical department, has been elected director and vice-president of **Bell Chemical Co., Inc.,** Reading, Pa. Mr. Linberg's headquarters will be in Boston, Mass., where he will direct sales of the corporation.

Dr. Thomas H. Daugherty has replaced Dr. Everett P. Partridge as director of research for **Calgon, Inc.,** Pittsburgh, Pa. Dr. Partridge has become director of **Hall Laboratories, Inc.,** an associated firm in the Hagan Corporation group.

Tom Turner has been elected a vice-president of **Westinghouse Electric Corporation,** and will take charge of plant labor relations, with headquarters in Pittsburgh, Pa. His position as head of the Westinghouse Elevator Division at Jersey City, N. J., will be filled by Vice-President W. O. Lippman.



WHAT THE

TEXTILE MILLS

ARE DOING

Land has been purchased by **Acala Cotton Mills, Inc.,** in the Port Chicago area, near San Francisco, Cal., for the establishment of a cotton mill. The mill, when completed, is expected to have 20,000 spindles and employ more than 500 persons. Sheetings will be produced, with broadcloths and finer goods to be added later. Scott C. Towar is president.

The new plant of the **Delta Finishing Co.,** a division of J. P. Stevens & Co., Inc., has been completed at Kollock, S. C. It will be used for finishing rayons.

A modernization and improvement program has been planned at the **Glasco (Conn.) Finishing Co.** plant, which will provide for increased capacity and higher efficiency.

Controlling interest in **Silver Lake Co.,** Chattahoochee, Ga., has been acquired by **Samson Cordage Works,** Shirley, Mass., sash cords, twines, etc.

The newly chartered **Fairview Mills, Inc.,** 70 Prospect St., New Bedford, Mass., will operate a plant for manufacture of rayon fabrics and yarns. Walter W. Schorr is president.

The **Chute Worsted Co.** has moved to larger quarters at 984 Main Street, Brockton, Mass.

Peter Fiory, president of **Oxford (N. J.) Textile Finishing Co.,** has purchased the mill and business of **Sussex Dye & Print Works,** Newton, N. J. A modernization and improvement program will be carried out for complete processing of rayons and kindred fabrics.

Joseph Stumer, 16 Court St., Brooklyn, N. Y., is attorney and representative for the newly incorporated **Robin Screen Print, Inc.,** which will operate a textile dyeing and printing plant.

Kayplex Corp. was recently organized to manufacture elastic woven fabrics. Arthur Ackerman, 207 Fourth Ave., New York, N. Y., is attorney and representative.

An expansion and modernization program is planned for the **Marion (N. C.) Manufacturing Co.,** cotton fabrics. The entire project, including installation of new machinery, is reported to cost over $500,000.

Naumkeag Steam Cotton Co., Salem, Mass., is reported to be planning construction of a new branch mill at Penrose, N. C. Removal of certain equipment from Salem to Penrose is anticipated. The new plant, which will comprise a complete integrated unit for carding, spinning, weaving, finishing, etc. is reported to cost nearly $2,500,000.

A new branch mill at Wilmington, N. C., is planned by **Woonsocket Falls Mill,** Woonsocket, R. I. The entire project is reported to cost about $3,500,000, with equipment, and more than 650 persons will be employed.

As part of its expansion program, **Abbeville (S. C.) Mills Corp.,** is planning early installation of 60 new looms and accessory equipment, as well as new dyeing and finishing machinery. The entire modernization project will represent a reported investment of about $600,000.

Contract has been let by **American Thread Co.** for a one-story addition to its mill at Bristol, Tenn., totaling about 25,000 square feet of floor space.

The mill of **Mountain Woolen Mills, Inc.,** Ludlow, Vt., has been taken over by **Thomas Woolen Mills, Inc.,** Fabyan, Conn. Production is expected to begin soon.

Plans are under way for construction of a two-story addition to the plant of **Rock River Woolen Mills,** Janesville, Wis.

Licenses have been granted by **Joseph Bancroft & Sons Co.** to Robertson Bleachery & Dye Works, Inc., New Milford, Conn., and Cold

Speed Up
Your Old Equipment
with New Load-Floating
Colson Casters
Rolling equipment that doesn't roll easily reduces efficiency and profits in your mill. There are 1458 standard Colson casters—many designed especially for Textile mills. They roll easily over all floors, swivel freely, are rust-resistant. Many models have thread guards. Colson also manufactures a wide range of trucks for the Textile Industry—hand trucks, platform trucks, box trucks, drum and barrel trucks and special devices. Write us or consult your phone book for the local Colson office.
Model 3-427-16 with thread guards, designed especially for the Textile Industry
Write Today For Free 68 Page Catalog
THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS • • LIFT JACK SYSTEMS • • INDUSTRIAL TRUCKS

Spring Bleachery, Inc., Yardley, Pa., for production of over-all durable lustrous effects for fabrics under Bancroft patent. This includes denims, chintzes, taffetas, etc.

Contract has been let by **Monroe (Ga.) Cotton Mills,** jeans, twills, etc., for an addition to the mill. No estimate of the cost has been announced.

An expansion program for increased capacity is under way at **Southwell Combing Co., Inc.,** North Chelmsford, Mass. Additional equipment will be provided.

International Looms of New Jersey, Elizabeth, N. J., has an improvement program in progress, which includes modernization of the dyeing and finishing department.

Construction is planned of an addition to the Plaid Mills of **Burlington Mills Corp.,** at Burlington, N. C. The new addition will provide a new weaving department concentrated on ground floor level.

Ragan Spinning Co., Gastonia, N. C., is converting its mill from manufacture of fine combed cotton weaving yarns to spun rayon fabric production.

Property in Philadelphia, Pa., has been leased by **Steralon Products, Inc.,** New York, N. Y., to be equipped for manufacture of textile fabrics under a new, non-woven process. Henry H. Frede is president.

Borden Mills, Inc., Kingsport, Tenn., have been awarded the Liberty Mutual Insurance Co.'s accident prevention flag, in recognition of their outstanding industrial safety record.

Russell Manufacturing Co., Middleton, Conn., recently dedicated their new plant at Bennettsville, S. C. This will be the largest plant in the world designed and equipped exclusively for the production of Venetian blind tape.

Riverside Worsted Co., Inc., Woonsocket, R. I., has installed new French type worsted drawing equipment.

A complete rayon dyeing and finishing unit has been added to **Godfrey Woolen Mills,** Philadelphia, Pa. Where previously just carded woolens were produced, the mill is now manufacturing a rayon gabardine for women's wear, and a regular gabardine for men's wear.

Edward Edelson is president of the new **Bondsville (Mass.) Print Works, Inc.** (formerly West Warren Print Works, Inc.). Remodeling, modernization, and reorganization of the plant is expected to result in one of the best equipped and most modern screen printing plants in the world. The New York office of the Bondsville Print Works will be at 145 West 41st Street.

Treasured Fabrics, Ltd. is the new name for the Santa Ana (Cal.) Woolen Mills, which were recently sold by Quentin Matzen. Under new management, the mill is said to be producing between 6,000 and 10,000 yards of fabric weekly. Mr. Matzen remains as general manager. The new owners are Jacob Golden of Santa Monica, Cal., Mrs. Evelyn Harris of Santa Ana, and Ben Kaufman of Phoenix.

A two-story addition to **Limestone Manufacturing Co.,** Gaffney, S. C., now under construction, will cost over a million dollars, according to reports. 45,000 square feet of space

for steel in a *hurry!*

DIRECT from warehouse TO YOU

One of the South's largest varieties of steel products . . . is ready for rapid delivery to you, whether you need one piece or a hundred!

Hot-rolled rounds, squares, flats, strip, sheets and plates • Structural angles and channels • I-beams and H-beams • Stainless steels • Rigidized metals • Cold-rolled sheets, rounds, squares and flats • Galvanized sheets • Copper sheets and strip • Screw stock • Bolts, nuts and rivets.

There are plenty of others! Write for our complete list of products and prices.

Service in Step with Southern Progress

WAREHOUSE DIVISION

Atlantic Steel Company

ATLANTA, GEORGIA • EMERSON 3441

HALLOWELL

Steel Collars

HALLOWELL Solid Steel Collars, functionally proportioned throughout . . . precision-machined so faces run perfectly true . . . are beautifully polished all over . . . yet they cost less than common cast iron collars. 3" bore and smaller are made from Solid Bar Stock. To make sure the collar won't shift on the shaft, they are fitted with the famous UNBRAKO Knurled Point Self-Locking Socket Set Screw—the set screw that won't shake loose when once tightened. HALLOWELL . . . a "buy word" in shaft collars . . . available in a full range of sizes for

IMMEDIATE DELIVERY

Write for name and address of your nearest HALLOWELL and UNBRAKO Industrial Distributors.

OVER 47 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN 34, PENNSYLVANIA

FIFTEEN-YEAR GROUP AT JOANNA MILLS

Employees who have been with the **Joanna (S. C.) Cotton Mills Co.** for fifteen years, recently assembled in front of the main building for an anniversary photograph.

will be provided, and 225 additional looms and supporting machinery will be housed in the new structure.

Plans are under way to have the basement at **Lydia Cotton Mills,** Clinton, S. C., lowered to add approximately 50,000 square feet of space. New machinery is expected to be installed in the basement.

It is reported that a new plant, to cost about two million dollars, is planned as an expansion unit of the **North Georgia Processing Co.,** Toccoa, Ga., a subsidiary of the J. P. Coates, Inc. Options have been taken on a 75-acre site south of Toccoa.

Mooresville (N. C.) Mills held open house recently for more than a thousand people in the community. Tours were conducted through the mill, and refreshments were served at the nearby community house.

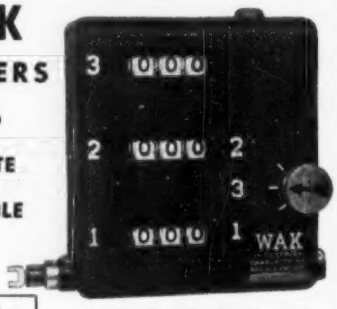
A new company, known as the **Southern Silk Screening Corp.,** will

OVER 500 MILLS COUNT ON

*WAK

COUNTERS

★ RUGGED ★ ACCURATE ★ DEPENDABLE ★



We Build to Your Specifications

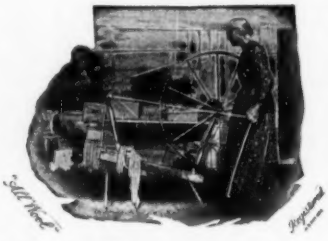
Hank Clocks
Rotary Counters
Tenter Counters
Inspection Counters
Pick Counters
Twister Clocks
Hosiery Counters
Pairing Counters
Yardage Counters
Slasher Counters
Sewing Counters
Special Counters
Reset, Non-reset—Single or Multiple Shift

Join the hundreds of smart mill operators who count on WAK for greater economy, extra years of service. Investigate the durability features of WAK Counters, and discover for yourself how they cut down repair and replacement costs.

See Our Representative, Or Inquire Direct

WAK INDUSTRIES CHARLOTTE N. C

*T.M. Reg. U. S. Pat. Office



KNOXALL

ROLLER, SLASHER AND CLEARER CLOTH
ENDLESS BLANKETS RAYON SLASHER JACKETS
ENDLESS REVOLVING CLEARERS

EDWARD H. BEST & CO.

Est. 1888 BOSTON, MASS. Inc. 1901

ATLANTA, GA.
W. C. HAMES
185 Pinecrest Ave., Decatur, Ga.
Dearborn 8974

NEW YORK
H. W. CURTIS
735 W. Crescent Ave., Allendale, N. J.
Allendale 1-3521

GREENVILLE, S. C.
WILLIAM J. MOORE
P. O. Box 1970
Tel. 5-4820

be located at Florence, Ala., near the J. T. Flagg Knitting Co. J. T. Flagg is president of the new organization.

Additional looms will be installed during the next six months at the Sherbrooke, Que. mill of **Bruck Mills, Ltd.,** to handle an increased volume of rayon suitings.

Contract has been let for installation of an internal sewage system at the Saylesville (R. I.) Bleachery of **Sayles Finishing Plants, Inc.**

A $4,000,000 fine combed fabrics plant of Maverick Mills, to be known as **White Horse Mills,** is under construction near Greenville, S. C. The plant will cover about five acres of floor space, and will have 30,000 spindles and 500 looms, according to Noble Foss, president of Maverick.

The former Brooks Spinning Mills, Newnan, Ga., which was purchased by J. O. Hutchinson, W. J. Estes, and L. O. Hutchinson, of Haralson, Ga., is now called **Coweta Mills** and is expected to be in operation shortly. The mill will make rope, mop, and chenille yarn.

A beam and package dye plant will be under construction shortly at the Republic Cotton Mills Division of **J. P. Stevens & Co., Inc.,** Great Falls, S. C., according to a recent announcement. With this new plant, the Great Falls mills can do a complete job of finishing grey yarns.

A large textile mill is now under construction in Ciudad Trujillo, R. D., to be operated as a branch of **"La Algodonera, C. por A."** The plant will consist of three major buildings, for spinning, weaving, dyeing and finishing of yarns and fabrics from locally grown cotton. Other facilities will be housed separately. This is the second large textile mill to be erected in the city in less than a year. Machinery was purchased in the United States.

Stanley (N. C.) Mills, Inc., has announced that it is changing over from the production of combed cotton yarns to spun rayon yarns

The **Woonsocket Falls Mills,** Woonsocket, R. I., have announced plans for construction of a pile fabrics plant at Wilmington, N. C. It will be a one story building, of brick, concrete, and steel construction, and will cost approximately $3,500,000, with equipment.

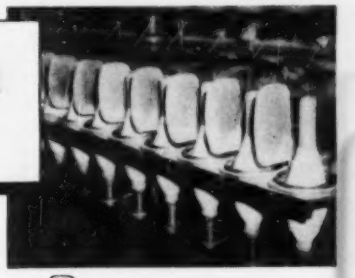
Plans for construction of a 900-loom plant near Belton, S. C., for the manufacture of rayon and other synthetic fabrics, have been announced by **Peerless Mills Co., Inc.,** New York, N. Y. The new mill and equipment are expected to cost about $2,000,000.

The Toxaway plant of **Textron Southern, Inc.,** is undergoing a modernization program, with a million dollars in new textile machinery scheduled for installation before the end of 1950. 200 new 56" box looms will be brought into the plant to make fabrics from synthetic fibers, such as Orlon and nylon, according to Royal A. Little, Textron president.

Goodyear Clearwater Mills, Rockmart, Ga., have announced plans to offer for sale approximately 500 company-owned homes in Rockmart and Cedartown. Employees of the mill will be given first opportunity to buy the homes.

Dan River Mills, Inc., have announced plans for a new rayon dyeing and finishing plant, to cost approximately $4,000,000.

SPIN BIGGER PACKAGES



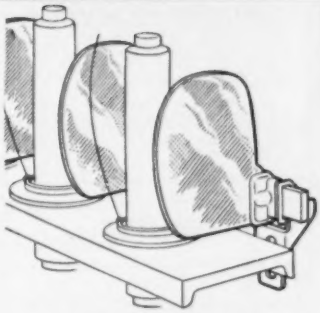
ON YOUR PRESENT FRAMES WITH LARGER RINGS, LONGER TRAVERSE and

WHITEHEAD

Permalite

ALUMINUM ALLOY

SEPARATOR SHIELDS



24 different shapes and sizes

Whitehead Permalite Shields are strong as steel but many times lighter. They mount right on the ring rail and can be flipped back for doffing. Available in a complete range of shapes and sizes for any spinning or twisting need—tall, slim ones; short, broad ones; big ones and little ones. And with all their superiority, they cost no more!

EASY TO INSTALL—Simply drill and tap ring rail. We supply the shields and bar drilled to your gauge and ring count, together with proper support hangers and all screws and washers.

EACH JOB ENGINEERED—When ordering specify rail width, thickness of back flange, gauge and number of rings in each rail on one side only, as 24-22-22-22-24.

ONLY WHITEHEAD PERMALITE SHIELDS OFFER THESE ADVANTAGES

- Fewer ends down; some mills report 27% less
- Use of lighter travelers which reduce power costs, wear of rings and travelers
- Solid polished blades (not slotted) which cause less wear on yarn, collect less lint and fly, resulting in smoother yarn
- Less vibration, wear of cams, worm gears and lifter-rod bearings
- Reduction of live weight—from as much as 300 lbs in old slotted steel shield assemblies to as little as 35 lbs per frame
- No attention after installation

OVER 4,000,000 IN USE BY MORE THAN 350 AMERICAN MILLS

Immediate delivery from stock on all items

PATENTED AND MANUFACTURED BY
WHITEHEAD ENGINEERING CO.
522 WEST PEACHTREE STREET, N.W.
ATLANTA 3, GEORGIA

EXCLUSIVE DISTRIBUTORS
Meadows Manufacturing Co.
BOX 8158 • ATLANTA, GEORGIA

SEE YOUR MEADOWS MAN
ALABAMA, GEORGIA, MISSISSIPPI
Sam Hogg, Box 4354, Atlanta, Ga.
SOUTH CAROLINA
J. P. Coleman, Box 1351, Greenville, S. C.
NORTH CAROLINA
Walter Coleman, Box 722, Salisbury, N. C.
TENNESSEE
Ed F. Brown, 417 Dale Avenue, Knoxville, Tenn.
NORTHERN REPRESENTATIVE
Matthews Equipment Co., 836 Broadway, Providence, R. I.

CLASSIFIED ADS

BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

CLASSIFIED RATES

Rates are net, payable in advance each month. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2¼ inches.

Transient rate for display classified, $8.00 per inch.

Contract rate for space within 12 months period as follows:

	Per Inch		Per Inch
12 inches	$7.50	48 inches	$6.75
24 inches	7.25	96 inches	6.50
36 inches	7.00	180 inches	6.00

POSITION WANTED: 10c per word per insertion; minimum charge $2.00. Cash with order. Box Number address care of TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Ga., count as eight words. Advertisements for help wanted, equipment for sale, for rent or wanted, and professional cards are accepted at display rates only.

POSITIONS OPEN—MEN WANTED: We can place cotton mill mgr., foreign country; weaving supt. Crompton & Knowles and Draper looms; personnel mgr.; asst. supt. dyeing and finishing synthetic yarn fabrics; overseers and second hands cotton weaving for southern mills and mills in foreign countries; overseer cotton spinning for foreign country; 2 overseers cotton carding, combed yarns; boss knitter seamless hosiery; cotton cloth room overseer; overseer lace dyeing and bleaching; foreman full fashioned hosiery finishing and shipping; several production and time study men for southern mills; chemists and chemical engineers; industrial engineers; plant engineers and master mechanics; mill engineer with mechanical engineering degree; fixers for Draper and Crompton & Knowles looms for mills in the South and in foreign countries; full fashioned machine fixers.

We invite correspondence with executives seeking positions and with employers seeking new personnel.

CHARLES P. RAYMOND SERVICE, INC.

294 WASHINGTON STREET — Phone: Liberty 2-6547 — BOSTON 8, MASS.

Over 50 years of confidential employment service for men seeking positions and employers seeking men.

For Sale

10-Kw Electric Plant

Compact unit with engine and generator in streamlined housing. Automatic control, push-button starting. 115/230 volt, single phase, 60 cycle, 3 wire generator driven by efficient Willys gasoline engine. Mounted on skids, complete with remote switches, wire and tools. Operated only 500 hours before replaced with power line service.

Suited for industrial, commercial, construction or agricultural use; ideal for stand-by service. Will sell at $900, which is less than half its initial cost. Address Box 352, c/o TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 3, Ga.

MACHINERY IN STOCK

1—#12 Lattice Opener with #11 Saco-Lowell Condenser.

1—24" Whitin Waste Hopper, 1941 model, equipped with Sargent combs.

1—38½" F-5 Saco-Lowell Hopper.

3—Saco-Lowell Vertical Openers, gallow drives.

1—#7 Sturtevant Fan, ball bearings.

100M—8" quills, brass bushed, brass tipped, fits medium Whitin Spindle.

. . . **PARTIAL LISTING — LET US KNOW YOUR NEEDS** . . .

WILSON LEWITH MACHINERY CORPORATION

Post Office Box 4100 — Warehouse: Wilkinson Blvd.
CHARLOTTE, N. C. — Phone 4-2403 — Behind Barbeque Lodge

WANTED

General Overseer for a new tricot knitting department in an established textile concern in North Carolina. Must be qualified to train new employees in operation, maintenance and fixing on warp knit machines. Experienced full-fashioned supervisor would be considered. Reply Box 396, TEXTILE INDUSTRIES, 806 Peachtree St., Atlanta, Ga.

KNITTING MACHINES

NEW — USED — REBUILT

Scott & Williams, Banner, Brinton, Reading, Lieberknecht—all types for full fashioned, seamless and circular mills. A complete line of dyeing and finishing equipment.

MORRIS
SPEIZMAN
COMPANY, INC.

POSITION WANTED

Young Southern Textile Engineering graduate seeks industrial engineering work. 12 full months of experience. Qualifications are generous. Reply to Box No. 397, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Georgia.

EATON & BELL

Patent Attorneys
1208 Johnston Bldg.
Charlotte, N. C.
753 Munsey Bldg.
Washington, D. C.

WE BUY AND SELL
TEXTILE MACHINERY
THROUGHOUT THE WORLD!
GEORGE W. EGAN, INC.
"The Machinery Man Knows Everywhere"
WOONSOCKET, R. I. — Cables—EGANX

TEXTILE CHEMIST OR ENGINEER

Recent graduate, to do service work for starch manufacturer. Location Southeastern U. S., following 1 year training in northern laboratory. State age, experience, scholastic standing. Reply to Box No. 398, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Ga.

SALARIED POSITIONS. $3600 to $30,000.00

This confidential service for outstanding men who desire a new connection, will develop and conduct preliminary negotiations without risk to present position. Send name and address for details. Tomsett Associates, 1203-1 Berger Bldg., Pittsburgh 19, Pa.

DYESTUFFS

Will buy your surplus and obsolete dyes and chemicals for cash.

NEW ENGLAND PRODUCTS CO.
91 Oliver St. — Boston, Mass.

LEADERSHIP WHERE IT COUNTS . . FOR YOU!

TEXTILE INDUSTRIES' larger U. S. mill circulation means better results for advertisers

. . . 86% of TEXTILE INDUSTRIES' big net paid goes to men actually in the mills—men with direct production and mill management responsibilities. In the reader classifications making up this most sales-productive group, T. I. leads all other textile journals, both percentage-wise and in total.

T. I. LEADS IN CIRCULATION IN HEAVIEST TEXTILE PRODUCING AREAS

In New England TEXTILE INDUSTRIES has 4,352 paid subscribers; 7,992 in the South Atlantic—a combination of 12,344 which tops all other national textile papers in these markets. Mills of these two areas operate 89% of the nation's spindles, 85% of the looms, and account for more than 80% of all U. S. textile mill purchases.

T. I. LEADS IN PREFERENCE AMONG MILL EXECUTIVES

Survey was made in late 1949 to determine what publications were of most value in providing information helpful to mill operations. T. I. ranked first with total greater than next two publications combined.

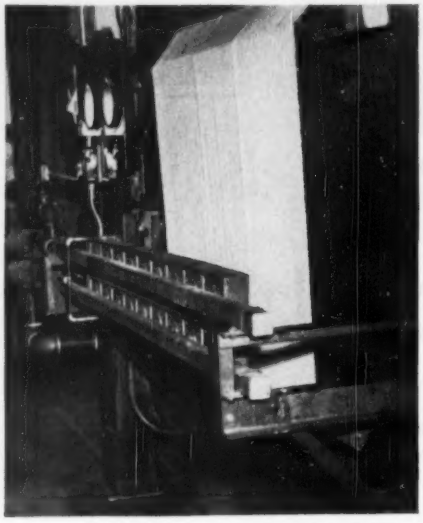
T. I. LEADS IN EDITORIAL HELPFULNESS TO PLANT OPERATION

T. I. readers last year received 796 articles, in 15 classifications, on mill management and production—the equivalent of almost 10 up-to-date reference books on textile manufacturing. This helpful editorial program has made TEXTILE INDUSTRIES first in reader preference among men in the mills, according to the most recent survey.

Textile Industries

806 Peachtree Street, N. E., Atlanta 5, Ga.

ADVERTISING REPRESENTATIVES:
Wellesley Hills, Mass., Arthur C. Shaw, 11 Monroe Rd.
Maplewood, N. J., Wm. K. Hoffman, 58 Euclid Ave.
Chicago, Ill., L. E. Allen, Madison-LaSalle Bldg.
Cleveland, Ohio, A. E. C. Smith, 609 Caxton Bldg.
Buffalo, N. Y., J. D. Parsons, 63 Barker St.
Charlotte, N. C., W. A. McGee, Box 562
Gastonia, N. C., W. C. Rutland, 1762 Poston Circle
Los Angeles, Calif., Loyd B. Chappell, 427 W. 5th St.
London, Eng., V. Delport, 2 Caxton St., S. W. 1



RED-RAY BURNERS

Increase production and improve quality on dryers and carbonizers.

Write for bulletins

RED-RAY MANUFACTURING COMPANY, INC.

455 W. 45th Street — New York 19, N. Y.

If you do:—

THREAD AND YARN

RAW STOCK

CURTAIN GOODS

HEAVY GOODS FOR VAT DYEING

TOWELING

VARYING LOTS

KNIT GOODS

You must have Kiers—

Allen Kiers

William Allen Son's Company

Worcester, Massachusetts

Twisting wet?

use **U. S. "SPECIAL BRONZE"**

for

Maximum Traveler Life

Get 20% to 35% greater life than ordinary bronze, with U. S. "SPECIAL BRONZE" travelers. This new alloy has definitely proved itself.

Test samples furnished you. There's a U. S. man near your mill. Call him and arrange a test for which he will furnish samples. And remember—

U. S. Deliveries are really prompt!

Prompt shipments from stock at Greenville, Providence

U. S. RING TRAVELER CO.

AMOS M. BOWEN, President & Treasurer

HOME OFFICE & FACTORY: PROVIDENCE, R. I.

SOUTHERN OFFICE & WAREHOUSE: GREENVILLE, S. C.

Write, Wire or Phone nearest office.

W. P. VAUGHAN, W. H. ROSE—Greenville, S. C.—Box 1048—Phone 3-0915
O. B. LAND—Athens, Ga.—Box 1187—Phone 478
L. M. MELLOR, JR.—Mid-Atlantic States—123 Treaty Rd.—Drexel Hill, Pa.—Phone Hilltop 8-1563
H. R. FISHER—Concord, N. C.—Box 85—Phone 8598
C. W. SMITH, H. J. SMITH—Providence—Box 1187—Gaspee 1-0100

Swatch-Cutting Sample Pinking Machines

ALL SIZES and TYPES

Hand and Power

Write Today for Catalogues

CHANDLER MACHINE CO.

30 West St. Ayer, Mass.

BARNES SERVICE *Consulting Engineers*

TO THE TEXTILE INDUSTRY FOR OVER ½ CENTURY

Surveys—Reorganizations—New Plant Developments for Cotton, Wool, and Synthetic Yarn and Cloth Processing, Bleaching, Dyeing, Printing and Finishing.

★ Plant Appraisals ★ Mechanical and Operating Surveys – New Methods ★ Scheduling and Planning ★ Work Load Studies, Job Analysis and Evaluation, with Incentive Plans ★ Standard Cost Installations ★ Cost Control Methods

Laborometer Burden-meter Waste-meter

BARNES TEXTILE ASSOCIATES, Inc.

Member of Association of Consulting Management Engineers, Inc.

70 HIGH STREET, BOSTON 10, MASS.

318 MONTGOMERY BLDG., SPARTANBURG, S. C.

European Agent: Ketah L. Maderg, 101 Rousmar, Paris 7

Index of ADVERTISERS

A

Abbott Machine Co. ..... *
Advertising Council, Inc. ..... *
Aldrich Machine Works 24
Allen Beam Company ..... *
Allen Son's Co., Wm. 202
Allis-Chalmers Mfg. Co. ..... *
Althouse Chemical Co. 88
Aluminum Co. of America 25
Amalgamated Chemical Corp. .. 34
American Air Filter Co. ..... *
American Aniline Products Inc. 163
American Associated Consultants, Inc. 154
American Cyanamid Co., Industrial Chemicals ..... *
American Lava Corp. 13
American Moistening Co. ..... *
American Monorail Co., Inc. ..112
American Steel & Wire Co. 32
American Textile Engineering. 40
American Viscose Corp. 41
American Yarn & Processing Co. 152
Amplex Division (Chrysler Corp.) ..... *
Anemostat Corp. of America ...171
Arkansas Company, Inc. 26
Armstrong Cork Co. ..... *
Arnold, Hoffman & Co., Inc. .. 23
Ashworth Bros., Inc. 48
Atkinson, Haserick & Co. 58
Atlantic Steel Co. 197
Atlas Electric Devices Co. 183
Avondale Mills 149

B

Bahnson Co. 60
Barker-Colman Co. (Controls) *
Barber-Colman Co. (Textile Div.) 56
Barnes Textile Associates Inc. 202
Beaty Machine Co., J. T. .... *
Becco Sales Corp. 86
Best & Co., Edward H. 198
Birch Brothers, Inc. ..... *
Birmingham Tank Co. ..... *
Blue Ridge Sales Div. ..... *
Bond Co., Charles ..... *
Borne, Scrymser Co. 189
Brinton Co., H. 149
Bristol Co., The 205
Brush Development Co. ..... *
Buffalo Electrochemical Co., Inc. 86
Buffalo Forge Co. 179
Butterworth & Sons Co., H. W. .....114 and 115

C

Calco Chemical Division .... *
Cameron Machine Co. 118
Carbomatic Corporation 204
Carborundum Co. 33
Carnegie-Illinois Steel Corp. .. 32
Carrier Corporation 19
Carter, Inc., A. B. ..... *
Celanese Corp. of American & Subsidiary Cos. 12
Chandler Machine Co. 202
Chapman Electric Neutralizer Co. ..... *
Ciba Co., Inc. 53
Classified Ads. .....200 and 201
Clayton Co., J. M. ..... *
Cleveland Tramrail Division .. 62
Clinton Foods Inc. ..... *
Clipper Belt Lacer Co. 205
Cocker Mach. & Fdry. Co. .. 34
Cole Mfg. Co., R. D. 203
Colorado Fuel & Iron Corp. The, Wickwire Spencer Steel Division 124
Colson Corporation 196
Columbia Steel Co. 25
Comer Machinery Co. ..... *
Commercial Factors Corp. .... *
Continental-Diamond Fibre Co. *
Corn Products Sales Co. 68
Crabb Company, William 181
Crane Co. 64
Crompton & Knowles Loom Works 16
Crossett Chemical Co. 170
Crouse-Hinds Co. ..... *
Curtis & Marble Machine Co. .. *
Cutler-Hammer, Inc. ..... *
Cyclotherm Corp. 169

D

Daniels, Inc., C. R. 176
Darnell Corp., Ltd. 195
Dary Ring Traveler Co. ..... *
Dayton Rubber Mfg. Co. ..... *
Dixon Saddle Co. 180
Dommerich & Co., L. F. ..... *
Dow Chemical Co. 51
Dronsfield Bros., Ltd. 190
Draper Corporation 1
Drew & Co., Inc. E. F. 74
Du Pont de Nemours & Co. Inc., E. I. (Dyestuff Div.) .. 47
Du Pont de Nemours & Co., Inc., E. I. (Electrochemicals Dept.) ..... *
Du Pont de Nemours & Co., Inc., E. I. (Finishes Div.). *
Du Pont de Nemours & Co. Inc., E. I. (Rayon Div.) .....120 and 121
Durant Mfg. Co. ..... *

E

Economy Baler Co. ..... *
Edda International Corp. .... *
Emmons Loom Harness Co. ... *
Excel Textile Supply Co. 172

F

Felters Company, The 151
Fidelity Machine Co. ..... *
Finnell Systems, Inc. 14
Fletcher Works ..... *
Formica Co., The ..... *
Foster Machine Co. 22
Foxboro Company ..... *
Franklin Process Co. ..... *

for Better Belt Joints
To keep belts in service longer, use only GENUINE Clipper Belt Hooks applied with Clipper Belt Lacers.
use Clipper Belt Hooks
Clipper Hooks are made of the finest quality wire—BETTER than ever before—produced for our exclusive use. Hooks hold with firm, sure grip—give longer satisfactory service.
and Clipper Belt Lacers!
The Clipper No. 9 Portable Lacer laces belts up to 6 inches wide in one quick, easy operation. Under powerful pressure hook legs are embedded flush with the surface of the belt and points clinched, making a perfect joint. Phone your mill supply jobber for a demonstration!
No. 9 Portable Lacer
CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN, U.S.A.
Clipper
BELT LACING EQUIPMENT

For Economical Maintenance
COLE
ELEVATED
TANKS
• Design plays an important part in tank maintenance. Experienced engineers design Cole tanks for easy access and minimum maintenance costs, as well as for permanence, safety, and dependability. Send us your inquiries for tanks 5,000 to 2,000,000 gallons — stating capacity, height to bottom, and location. Write for latest Cole catalog—"Tank Talk."
R.D. COLE
MANUFACTURING CO.
NEWNAN, GA.
Established 1854
POWERS
CYLINDERS

Specified by textile leaders for 69 years

HUBINGER

OK BRAND

THIN BOILING STARCH

• Always uniform • Always dependable
• Boils thin

The services of our technicians are always available without obligation.

THE HUBINGER CO.

Keokuk, Iowa — Est. 1901

Branch Offices
• Boston, Mass. • Long Island City, N. Y. • Chicago, Illinois

Distributed by
Ira L. Griffin, P. O. Box 1576
1429 Bryant Street — Phone 4-8306
Charlotte, N. C.

DINKLER HOTELS

in ATLANTA . . . The Ansley
Joe Cracy, Manager

in BIRMINGHAM . The Tutwiler
Ira M. Patton, Manager

in NEW ORLEANS The St. Charles
J. J. ("Mike") O'Leary, V. P. & Mgr.

in NASHVILLE . . . The Andrew Jackson
Leon Womble, Manager

in MONTGOMERY. The Jefferson Davis
Homer Spiva, Manager

Executive Offices: Atlanta
Carling Dinkler, President
Carling Dinkler, Jr., V. P. & Gen. Mgr.

CARBOMATIC
INFRA-RED
SINGEING UNIT

The only singeing unit that—equipped with its folder attachment—permits folding instead of re-rolling . . . thus avoiding beaming. Can also be furnished with brushes—before- and after-singeing. Singes both sides at same time—thoroughly and uniformly . . . up to 400 or more yds./minute. No burning or scorching. Same unit adjusts to handle rayons, acetates, cottons, woolens, of various widths and weights. Full-automatic. *Write for Bulletin C-8.*

CARBOMATIC CORPORATION • Pioneers in Textile Infra-Red
24-81 47th Street Long Island City 3, N. Y.
Southern Branch: Textile Specialty Co., Greensboro, N. C.
New England Representative: H. E. Linderson, 35 Westminster St., Providence, R. I.
(Phone Jackson 1-7075)

J. E. SIRRINE CO.
GREENVILLE • SOUTH CAROLINA

Engineers

TEXTILE MILLS • RAYON PLANTS • KNITTING MILLS • DYE HOUSES
BLEACHERIES • STEAM UTILIZATION • STEAM POWER PLANTS
WATER • WASTE DISPOSAL • APPRAISALS • PLANS • REPORTS

JENKINS RENEEDLING CO., INC.

The Largest Comber Reneedling Plant in the world.

•

HALF LAPS and TOP COMBS

Reneedled to Factory Specifications

•

We Use English Made Needles Exclusively

•

We carry a stock of 50 million needles at all times to insure our customers' combers operating.

GASTONIA, N. C.

Our half laps are guaranteed to gauge uniformly.

Dial 5-0522

Index of ADVERTISERS

G

Gardner-Denver Co. 51
Gaston County Dyeing Mach. Co. ..... *
Gastonia Brush Co. ..... *
Gastonia Textile Sheet Metal Works ..... *
Gates Rubber Co. 7
Gaylord Container Corp. ..... *
Geigy Co., Inc. ..... *
General Dyestuff Corp. ..... *
General Electric Co. ..... 44 and 45
General Radio Co. ..... *
Goodyear Tire & Rubber Co. .. *
Gulf Oil Corp. 27

H

H & B American Machine .. 4
Hart Products Corp. ..... *
Hayes Industries, Inc. ..... *
Hayssen Mfg. Co. 184
Henderson Fdry. & Mach. Co. Div. ..... *
Hercules Powder Co. ..... *
Hermans Machine Co. 188
Herr Mfg. Company 54
Hinnekens Machine Co. ..... *
Hofmann & Co., Inc., Alfred .. 152
Holt Hardwood Co. ..... *
Hotels Dinkler 204
Houghton & Co., E. F. 59
Howard Bros. Mfg. Co. 29
Hubinger Company 204
Hyatt Bearings Div. 164

I

Ideal Mach. Shops ..... *
Industrial Chemicals Div. .... *
Industrial Dryer Corp. 168
Interchemical Corp. (Textile Color Div.) ..... *
Ingalls Industries ..... *
International Nickel Co., Inc. .. 10
Iselin & Co., Inc., Wm. 173

J

Jacobs Mfg. Co., E. H. ..... *
Jarrett & Co., Cecil H. ..... *
Jenkins Metal Shops, Inc. ... 49
Jenkins Reneedling Co., Inc. ..204
Jenkins Sons, Inc., M. W. ... *
Jiffy Textile Marker Co. ..... *
Johnson Bronze Co. 123
Johnson Corp. ..... *
Johnson Machine Works, Chas. B. ..... *

K

Kali Mfg. Co. 152
Kearny Mfg. Co. ..... *
Keever Starch Co. 186
Kent Company, The ..... *
Kidde & Co., Inc., Walter 69
Kidde Mfg. Co. ..... *

L

Lambeth Rope Corp. 205
Lane & Bros., Inc., W. T. ... *
Laurel Soap Mfg. Co. ..... *
Lawlor Co., S. C. 178
Lasenby & Co., F. A. ..... *
Lee Co., L. A. 206
Lestershire Spool & Mfg. Co. . *
Libbey, Owecns, Ford Glass Co., Blue Ridge Sales Div. . *
Link-Belt Co. 80
Logan Company ..... *
Logemann Brothers ..... *
Loper Co., Ralph E. 149
Lunkenheimer Co. ..... *

M

McBride Co., Inc., Edward J. ..... Third Cover
Machinecraft, Inc. 122
Manton Gaulin Mfg. Co., Inc. .167
Maple Flooring Mfrs. Assn. ... *
Marquette Metal Products Co. 70
Mason-Neilan Regulator Co. ... *
Mathieson Chemical Corp. ..... Second Cover
M-B Products 184
Meadows Mfg. Co. ..... *
Meese, Inc. ..... *
Merrow Machine Co. 152
Metalsmith Division (Orange Roller Bearing Co.). *
Milton Machine Works 194
Minneapolis-Honeywell Regulator Co. (Industrial Div.) .. 66
Minnesota Mining & Mfg. Co... *
Moisture Register Co. 182
Monsanto Chemical Co. 5
Morningstar Nicol, Inc. 128
Mt. Hope Machinery Co. 188

N

Nash Company, J. M. 154
National Aniline Div. 30
National Ring Traveler Co. ..206
National Starch Products, Inc. . 72
National Tube Co. 25
New Departure Div. *
New England Bobbin & Shuttle Co. ..... *
New England Machine Works. *
New York & New Jersey Lubricant Co. 153
Nopoco Chemical Co. 57
Norcross Corp. ..... *

O

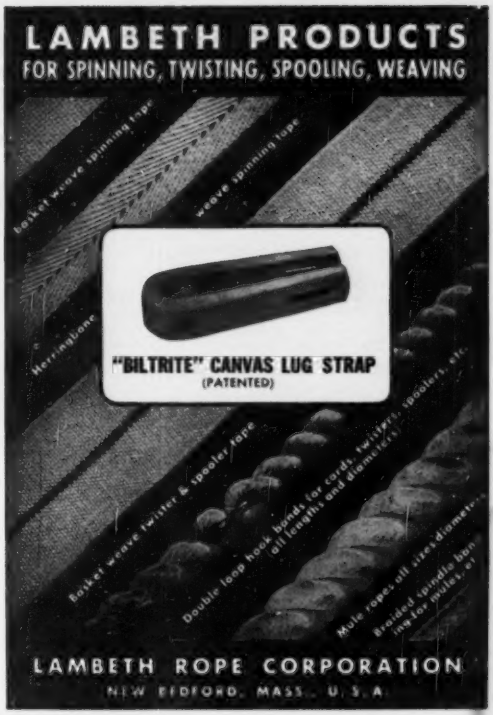
Oakite Products, Inc. 188
Onyx Oil & Chemical Co. 177
Owens-Corning-Fiberglas Corp. ..... *

P

Paddock Company, J. C. ..... *
Parks-Cramer Co. 160
Paisley Products, Inc. 128
Peerless Pump Division ..... *
Penick & Ford, Ltd., Inc. 207
Perfecting Service Company .. *
Perkins & Sons, Inc., B. F. .. *
Pittsburgh Plate Glass Co. ... 127
Pittsburgh Steel Products Co. . *
Pneumafil Corporation ..... *
Powell Co. Wm. 46
Powers Regulator Co. ..... *
Precision Gear & Mach. Co. .. *
Proctor & Gamble Distributing Co. 61
Proctor & Schwartz, Inc. 35 and 36

R

Red Ray Mfg. Co. 202
Reeves Pulley Co. 20


LAMBETH PRODUCTS
FOR SPINNING, TWISTING, SPOOLING, WEAVING
basket weave spinning tape
weave spinning tape
herringbone
"BILTRITE" CANVAS LUG STRAP
(PATENTED)
Basket weave twister & spooler tape
Double loop hook bands for cords, twisters, spoolers, etc. all lengths and diameters
Mule ropes all sizes diameters
Braided spindle bands for looms, etc.
LAMBETH ROPE CORPORATION
NEW BEDFORD, MASS., U.S.A.

Check humidity conditions in various parts of your mill with Bristol's handy Portable Humidity and Temperature Recorder.
Used in hundreds of textile mills to give a continual, visual picture of humidity and temperature. Easily carried, set on table, or hung on wall.
Immediate delivery from stock.

BRISTOL

A COMPLETE LINE OF AUTOMATIC CONTROLLING AND RECORDING INSTRUMENTS FOR TEXTILE MILLS

Please send me free bulletin.

THE BRISTOL COMPANY
157 Bristol Road
Waterbury 20, Conn.
Please send Bulletin on Portable Humidity and Temperature Recorder.

Name_____
Company_____
Address_____
City_____ State_____

"THERE IS HARDLY ANYTHING IN THE WORLD THAT SOME MAN CANNOT MAKE A LITTLE WORSE AND SELL A LITTLE CHEAPER, AND THE PEOPLE WHO CONSIDER PRICE ONLY ARE THIS MAN'S LAWFUL PREY." (John Ruskin)

There has never been a truer statement

AMERICAN, HICKS, WILSON, WENTWORTH DOUBLE DUTY, GRAVITY

Registered Trade Marks

ETARTNEP FINISH—New Chemical Process

Ring Travelers for Every Spinning and Twisting Purpose

NATIONAL RING TRAVELER CO.

PAWTUCKET, RHODE ISLAND — **CHARLOTTE, NORTH CAROLINA**

Philip C. Wentworth, Treas.

L. Everett Taylor, Gen. Mgr., Pawtucket, R. I. — H. B. Askew, Southern Agent, Charlotte, N. C.

SALES ENGINEERS

J. Kenneth Sumner, Charlotte, N. C.
Frank S. Beacham, P. O. Box 281, Honea Path, S. C.
W. Harry King, P. O. Box 272, Atlanta, Ga.

Donald C. Creech, Charlotte, N. C.
R. C. Munroe, Pawtucket, R. I.
Henry A. Carter, Pawtucket, R. I.

BALANCED READING

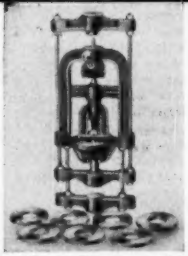
***. . . is the reason mill men swear by* TEXTILE INDUSTRIES**

The 1949 Editorial Index shows that T.I. readers last year received 796 articles, in 15 classifications, on mill management and production. This is the equivalent of almost ten up-to-date reference books on textile manufacturing.

The balance and diversity of this helpful editorial program has made TEXTILE INDUSTRIES *first in circulation* among textile mill men. And *first in reader preference*, too.

Renew your subscription NOW

TESTED IS TRUSTED



MODEL W BURST TESTER

One of the many *Scott Testers for "World-Standard" testing of textiles, rubber, paper, plastics, wire, plywood, up to 1 ton tensile.

SCOTT TESTERS

*Trademark

SCOTT TESTERS, INC.

60 Blackstone St., Providence, R. I.

Southern Representative: JOHN KLINCK — 304 W. Forest Ave. N. Augusta, S. Car.

An Up-to-Date

PRINTING PLANT

- Equipped with modern machinery and a staff of competent workmen, solicits thru this publication, a trial order on your printing needs.
- We have built a reputation that is known over the entire South by our special attention to the minutest detail.
- We are more than ready to answer any question that relates to your printing problems.

Write us and let us quote you on anything from a postal card to a fully bound book

L. A. Lee Company, Inc.

DALTON, GEORGIA

Printers and Publishers

FIT BETTER—WEAR LONGER

Precision-Built Kentex Aprons made to any specifications, on short notice. Write for free samples and prices. We are world's largest manufacturers of genuine leather textile aprons.

TEXTILE APRON COMPANY

EAST POINT, GEORGIA

Hugh Williams & Company, Toronto Canada—Canadian Representative

HEADQUARTERS

FOR

SIZING • PENETRANTS

SOFTENERS • ALKALIES

SHUTTLE DRESSING

"TWIST-SETTER" MACHINES

SEYDEL-WOOLLEY & CO.

TEXTILE CHEMICALS

748 RICE STREET • ATLANTA, GA.

SEYCO

Index of ADVERTISERS

Reiner, Inc., Robert 140
Rhoads & Sons, J. E. ..... *
Ridge Tool Co. 147
Riggs & Lombard, Inc. ..... *
Robert & Co. Associates, Inc. .. *
Rose Engr. Corp., J. O. .... *
Roy & Son Co., B. S. ..... *
Royce Chemical Co. ..... *

S

Saco-Lowell Shops 6
Sandoz Chemical Works, ... 17
Sarco Company, Inc. 52
Sargents Sons Corp., C. G. ..186
Scherr Co., Inc., Geo. ..... *
Scholler Bros., Inc.
Dura-Beau ..... *
Schollerized Products ..... *
Scott Testers, Inc. 206
Scott & Williams, Inc. 136
Selig Company 178
Seydel-Woolley & Co. 206
Shepard Niles Crane & Hoist Corp. ..... *
Sherwin-Williams Co. 37
Sims Company, The ..... *
Sims Metal Works ..... *
Sinclair Refining Co., Inc..... *
Sipp-Eastwood Corp. 122
Sirrine & Co., J. E. 204
SKF Industries, Inc 31
Smith, Drum & Company .. 11
Solvay Sales Division 28
Sonoco Products Co. 174
Southern Belting Co. ..... *
Southern Shuttles Div. 65
Southern Spindle & Flyer Co. 160
Southern States Equip. Corp. *
Southern Textile Exposition ... 42
Staley Mfg. Co., A. E. ..... *
Standard Chemical Prod. ..... *
Standard-Coosa-Thatcher Co. . *
Standard Fabricators, Inc.... *
Standard Mill Supply Co. ..187
Standard Oil Company, Inc.. *
Standard Pressed Steel Co. .....124 and 198
Steel Heddle Mfg. Co. 65
Steele Canvas Basket Co., Inc. 206
Stein, Hall & Co. ..... *
Sterling Ring Traveler Co., Inc. *
Stewart Iron Works Co., Inc. ..182
Stodghill & Company ..... *
Sturtevant Division 78
Supreme Knitting Machine Co 138
Sylvania Division 50

T

Taylor Instrument Cos. ..... *
Tennant Co., G. H. ..... *
Tennessee Coal, Iron and Railroad Co. 32
Tennessee Eastman Corp. 15
Tennessee Products & Chemical Corp. 82
Terrell Co. 8
Texas Co. 2
Textile Apron Co 206
Textile Banding Co. ..... *
Textile Banking Co., Inc. 9
Textile Hall Corp. 42
Textile Machine Works ..... 130 and 132
Textile Shield Co., Inc. 194
Textile Shops ..... Front Cover
Thomaston Mills ..... *
Tidewater Associated Oil Co. .. 76
Toledo Scale Co. ..... *
Ton-Tex Corp. ..... *
Torrington Co. .....145 and 146
Treasury Department ..... *
Trico Fuse Mfg. Co. 184
Trust Company of Georgia ... *
Turbo Machine Co. 142

U

Union Special Machine Co. ..148
U. S. Bobbin & Shuttle Co. .. *
U. S. Ring Traveler Co. 202
U. S. Steel Corp. 32
Universal Winding Co 18
Uster Corporation ..... *

V

Vanderbilt Co., Inc., R. T. .. *
Van Vlaanderen Machine Co. .. 21
Veeder Root Inc. .. Fourth Cover
Victor Ring Traveler Co. .... *

W

WAK Industries, Inc. 198
Walker Mfg. Co. 208
Wallerstein Co., Inc. ..... *
Want Ads .....200 and 201
Walton Laboratories, Inc. .... *
Warner & Swasey Co. 67
Waterous Company ..... *
West Point Fdy. & Mach. Co. . 43
Westinghouse Electric Corp. .. *
Westinghouse Elec. Corp. (Sturtevant Div.) 78
Whitehead Engr. Co. 199
Whitin Machine Works 55
Whitinsville Spinning Ring Co. 207
Wicaco Machine Corp. 190
Wickwire Spencer Steel Division of The Colorado Fuel & Iron Corp. 124
Wiesner Rapp Co. ..... *
Wildman Mfg. Co. 134
Willcox & Gibbs Sewing Machine Co. 59
Wilson Co., Emil V. ..... *
Wolf & Co., Jacques ..... *

Y

York Corporation ..... *

Z

Zurn Co., O. F. ..... *

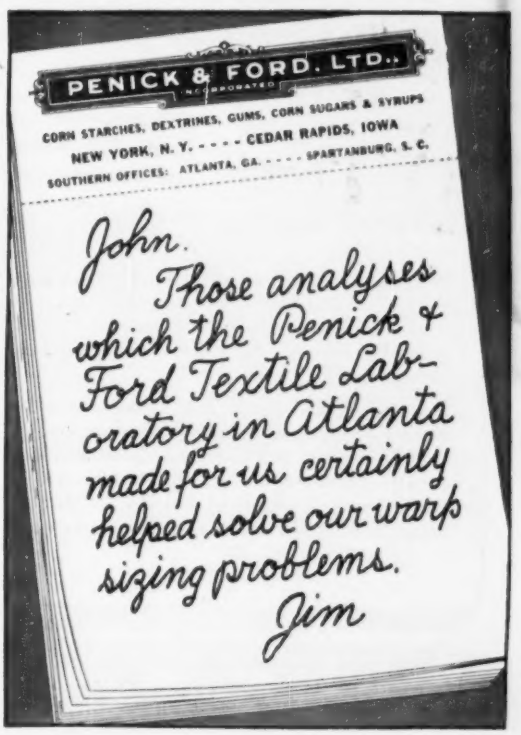
Spin warp or filling using the same holders

Our Plateholder Bushing permits smaller rings in same holders, as illustrated. For details, send sample of your cast iron holder and state filling ring diameter and flange.

WHITINSVILLE (MASS.) SPINNING RING CO.

DIAMOND FINISH

Makers of Spinning and Twister Rings since 1873

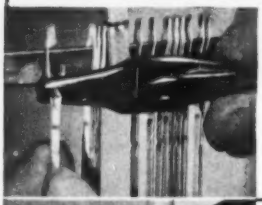

PENICK & FORD, LTD., INCORPORATED
CORN STARCHES, DEXTRINES, GUMS, CORN SUGARS & SYRUPS
NEW YORK, N. Y. - - - - CEDAR RAPIDS, IOWA
SOUTHERN OFFICES: ATLANTA, GA. - - - - SPARTANBURG, S. C.
John.
Those analyses which the Penick & Ford Textile Laboratory in Atlanta made for us certainly helped solve our warp sizing problems.
Jim

NEW! Fast! Low Cost

WALKER LOCK-ON* HEDDLE REPAIR

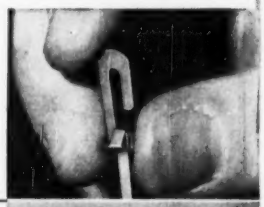
Just 3 Easy Steps

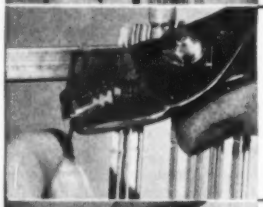
Walker "Lock-On"* Heddle Repair offers real savings through reduced down time, faster repair and low initial cost. In these 3 quick easy steps the repair can be made without disturbing the warp. No need to break ends—no chance to soil the warp. All you do is:



1

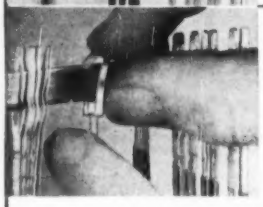
Break off the broken end loop at the exact bottom with a pair of pliers.





2

Insert the heddle shaft into the Walker Lock-On Repair Head and fold over clip and tongue. This locks the head securely on the shaft.



3

Slip loop over heddle rod and re-start the loom. This entire operation takes only one third the time per end required for the old method.

FOUR SIZES COVER ALL NEEDS. The heddle wire size, not the length, determines the repair head you need. Three sizes cover all but the very heaviest gauge heddles. So you've no inventory problem with Walker Lock-On.

LOW COST THREE WAYS. The Walker Lock-On Heddle Repair brings you low initial cost (about ½ to ¼ the cost of old style repair heddles) and greatly reduced down time for heddle repairs. Cloth quality is improved; you do not need to break the warp end or otherwise disturb the warp.

LOCK-ON IS IDEAL FOR MIS-DRAWS, as the heddle wire remains the same throughout the warp. In this case Lock-On forms both top and bottom loop.

A COMPLETE LINE OF LOOM HARNESS manufactured by Walker includes heddles, frames and reeds for all yarns and weaves. For a comprehensive service on all your loom harness problems, consult Walker today.

Write today for free samples and descriptive literature on Walker Lock-On—Dept. TI-1.

WALKER
MANUFACTURING COMPANY, INC.
ATLANTIC & RUTH STS., PHILA. 34, PA.

WALKER LOOM HARNESS

HEDDLES • HEDDLE FRAMES • REEDS

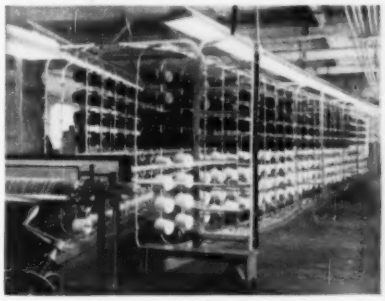
**Fully protected by patents applied for.*

Mc BRIDE **TEXTILE EQUIPMENT NEWS**

PUBLISHED BY EDWARD J. McBRIDE CO., INC. • 1398 ADAMS AVENUE • PHILADELPHIA 24, PA.

PROMINENT WOOLEN AND WORSTED MANUFACTURER

CUTS WARPING COSTS 30% WITH McBRIDE MAGAZINE CREEL



The new McBride SRM Magazine Creel shown here installed in a leading Pennsylvania woolen manufacturing plant has cut warping costs by 30%, more than doubled warping speeds and solved a number of production problems for the company.

THE OLD METHOD involved the use of small, forty end creels for the transfer of the yarn onto jack-spools. These jack-spools were placed in a creel and reeled onto the beaming frame, then in turn to the loom beam.

This method caused a number of additional problems, including the necessity for frequent end tying requiring time and leaving knots in the warp. The maximum speed obtainable was 80 to 150 yards per minute. Two to three hours were required for set-up of a new pattern — all lost time from a production viewpoint.

The use of different types and sizes of yarn packages was difficult and frequently involved an additional winding operation.

WITH THE NEW McBRIDE MAGAZINE CREEL a full run can be made without the necessity for end tying and with the very minimum of down time.

Speeds of from 250 to 400 yards per minute are regularly obtained and it is the belief of the superintendent that speeds over twice this could be consistently run with lighter yarns.

Pattern changes are now accomplished much more rapidly than formerly. The McBride magazine features permit a complete new pattern to be set up on the creel while the preceding pattern is being run.

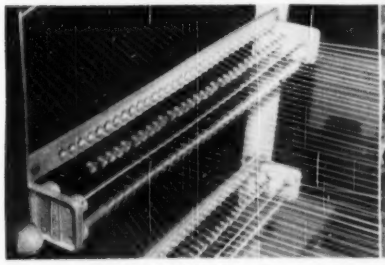
Special revolving spindle helps speed tying of transfer tail to new package.

PROBLEM:

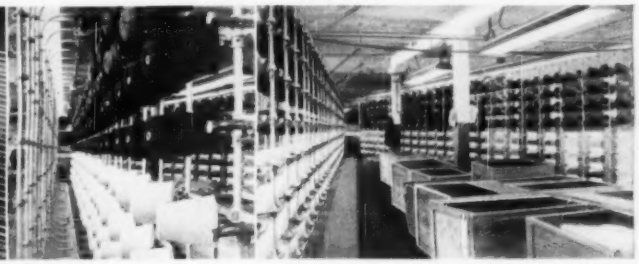
- Cut cost.
- Increase warping speeds.
- Speed pattern changes.
- Eliminate down time.

SOLUTION:

- Warping costs cut 30%.
- Speed more than doubled.
- Pattern changes easier, faster.
- Down time practically eliminated.



1. New improved McBride electromagnetic stop motion stops warper instantly in case of yarn break. The two-way signal lights enclosed in a steel channel for maximum protection speed location of broken ends.



2. Note the adequate ballooning space, giving easy access to packages for the creeler.

3. Every McBride SRM Magazine Creel is engineered to fit the specific requirements of the yarn and the plant's physical layout. Numerous columns would have prevented erection of sufficiently large creel by conventional means.

COMPLETE ENGINEERING SERVICE IS PART OF EVERY McBRIDE INSTALLATION

GREENVILLE TEXTILE SHOW BOOTH 353

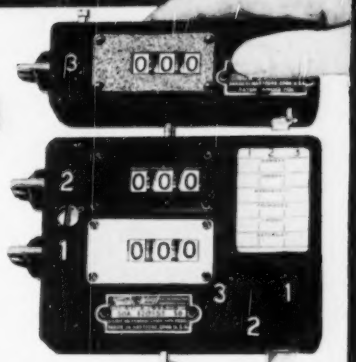
CREELS *for every purpose,* WARP BEAMS • FLANGES • ROLLS **Mc BRIDE**

Open Up New Savings with Modern Veeder-Root Reset 2-3 Pick Counters

Yes, every time you open up a box that holds a brand-new Veeder-Root 2-3 Convertible Pick Counter, you open up these new savings:

TIME IS SAVED (not to mention wear and tear on the hands) by Veeder-Root's streamlined plastic reset knobs that fit the fingers *and don't have to be pulled out.* So weavers can reset *New* 2-3 Pick Counters in double-quick time . . . without knocking themselves out!

MONEY IS SAVED because Veeder-Root's *Locked Wheels* resist mechanical overthrowing . . . and because they're constructed for strength plus low weight, to reduce wear from vibration.



Order *New* Veeder-Root 2-3 Pick Counters *now* . . . for the sooner they're installed, the sooner they'll pay for themselves. Get in touch with the nearest office.

VEEDER-ROOT INCORPORATED

World's Largest Manufacturers of Counting & Computing Devices

HARTFORD 2, CONNECTICUT • GREENVILLE, SO. CAROLINA

In Canada Veeder-Root of Canada, Ltd., 955 St. James Street, Montreal 3.
In Great Britain Veeder-Root Ltd., Kilspindie Road, Dundee, Scotland.

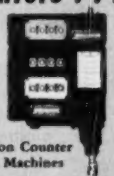
"Counting House of the Textile Industry"

World's Most Complete Line of Textile Counters . . .

New "Dozens" Counter for Glove and Hosiery Mills

2-3 Convertible Hank Counter

Loom Cut Meter



2-3 Revolution Counter for Knitting Machines

Above: Adding 3rd Counting Unit to 2-3 Convertible Pick Counter

. . . all these and scores of other types . . . Send for Catalog T-48